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AUTHOR Pribyl, Paul F.
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ABSTRACT

This training unit on inspection is part of a 17-unit course package written to aid instructors in the development, teaching, and evaluation of fire fighters in the Wisconsin Fire Service Certification Series. The purpose stated for the 4.5-hour unit is to give the fire fighters an insight into their responsibilities concerning fire prevention and inspection practices. An instructor's guide sheet provides this information: introduction to the topic, instructor preparation, length of unit, methods of instruction, testing, equipment and facilities required, recommended visual aids, and references. Following a list of unit objectives, a lesson plan outlines the main teaching points and states the preferred teaching method, cites the reference and page number(s) where the information is to be found, and indicates the necessary handouts. Other contents in the unit include a unit quiz, answer key to the quiz, and handouts (graphs, student worksheets, informational material, and forms). (YLB)

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Robert P. Sorensen, Ph.D., State Director

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FIRE SERVICE CERTIFICATION SERIES

UNIT FSCS-FF-17-81

INSPECTION

FIRE SERVICE TRAINING

Simon L. Hertzler
Vocational Education Consultant

Paul F. Prioyl
Vocational Education Consultant

BUREAU OF PROGRAM DEVELOPMENT

George R. Kinsler
Bureau Director

Arnold H. Potthast
Chief Supervisor
Vocational Education

CE 033914

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INSPECTION

Prepared by:

Paul F. Pribyl, Consultant
Fire Service Training

INTRODUCTION

This unit is designed to give the firefighters an insight into their responsibilities concerning fire prevention and inspection practices.

Upon completion of the unit, the candidates should be familiar with the various fire prevention activities carried out by the typical fire department, w hat part they and their company will play in the department's inspection program and what other agencies have responsibilities in fire prevention, protection or investigation.

They should also know what they and their company will be looking for during inspections, procedures and terminology concerning inspections, and basic references used in fire prevention and inspection work.

INSTRUCTOR PREPARATION

Carefully study the objectives to determine the goals that have been set for the fire-fighters upon completion of this unit.

Review the lesson plans and if necessary, consult the references listed.

Develop suitable audio-visual aids, provide training area and necessary tools and equipment to effectively teach this unit.

LENGTH OF UNIT

Classroom	4 hours
Evaluatuion and Testing	30 minutes

METHOD OF INSTRUCTION

Lecture/Conference

Suggested methods and techniques are listed under Instructors Notes on the lesson plan. For further information consult Fire Service Instructor, IFSTA, 4th Ed., pp. 69-74

TESTING

At the end of this unit a written quiz of five or more questions will be given.

EQUIPMENT AND FACILITIES REQUIRED

Classroom with necessary visual aid equipment
Copies of pertinent codes, ordinaces and standards covered.
Slides of fire or life safety hazards which may have been found.

REFERENCES

1. Hudiburg, E. and Thomas, C., Ed., Fire Inspection Practices, #110, IFSTA, Stillwater, 4th ed., 1974, pp. 1-229

2. N. F. P. A. Inspection Manual, Boston

3. Local References and Ordinances

4. Hudiburg, E. and McCoy C., Ed., Fire Service Practices for Volunteer Fire Departments, #201, IFSTA, Stillwater, 5th ed., 1971, pp. 207-215

5. Peige, J., Ed., Essentials of Fire Fighting, #200, IFSTA, Stillwater, 1st ed., 1977 pp. 288-310.

OBJECTIVES

All objectives in this unit are to be met according to the material contained in the International Fire Service Training Association Manuals #110 Fire Inspection Practices, #200 Essentials of Fire Fighting, #201 Fire Service Practices for Volunteer Fire Departments.

To satisfactorily complete this unit, the firefighter must attain a grade of 70 or higher on the written quiz and satisfactorily complete the practical skills tests.

NFPA STANDARD 1001

INSPECTIONS

Fire Fighter I

3-11 INSPECTION

3-11.1 The firefighter shall demonstrate, in writing, knowledge of the common causes of fires and their prevention.

3-11.2 The firefighter shall demonstrate a knowledge of the fire inspection procedures used by the fire department.

3-11.3 The firefighter shall describe the improtance of public relations relative to the inspection programs of the fire department.

3-11.4 The firefighter shall identify dwelling inspection procedures established by the authority having jurisdiction.

Fire Fighter II

4-11 INSPECTION

4-11.1 The firefighter shall prepare diagrams or sketches to record the locations of items of concern during pre-fire planning operations.

4-11.2 The firefighter shall collect and record in writing information required for the purpose of preparing a report on a building inspection or survey.

4-11.3 The firefighter shall demonstrate school exit drill procedures as specified by the authority having jurisdiction.

4-11.4 The firefighter shall demonstrate life safety programs for the home.

4-11.5 The firefighter shall identify common fire hazards and make recommendations for their correction.

COURSE: FIRE SERVICE CERTIFICATION SERIES

LESSON: INSPECTION

EQUIPMENT NEEDED: SLIDE, OVERHEAD OR MOVIE PROJECTOR, SCREEN

TRAINING AIDS: TRANSPARENCIES, SLIDES, FILMS, TEXTS

INSTRUCTORS NOTES	TEACHING POINTS
Ref: Essentials of Fire Fighting, #200, IFSTA 1st ed. pp. 289-310 Ref: Fire Prevention & Inspection, #110 IFSTA 4th ed., pp. 1-229 3-11 Inspection 3-11.1 3-11.2 Ref: pp. 289-301 #200 pp. 1-64 #110	I. FIRE PREVENTION AND INSPECTION A. Fire Prevention 1. Educational and enforcement activities designed to increase public awareness of fire and life safety problems and to promote the removal of these problems. 2. Fire Inspection The search for fire hazards and the necessary enforcement of fire and life safety regulations to remove these hazards. Also made for fire department familiarization purposes. II. FIRE PREVENTION ACTIVITIES A. Engineering Fire department review of building plans and specifications. B. Education 1. Lectures and demonstrations of fire safety. 2. Community youth organizations. 3. Literature campaigns 4. Radio, Television and Newspapers. C. Inspections (Enforcement) With the exception of building surveys, inspections are aimed at fire prevention. 1. Inspections made by individuals Fire prevention officer, inspectors or bureaus. Objectives of these inspections are similar to company inspections plus the interpretation and enforcement of standards, codes and ordinances.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA 4th ed. pp. 1-229

3-11 Inspection

3-11.1
3-11.2

Ref: pp. 289-301 # 200
pp. 1-64 #110

II. FIRE PREVENTION ACTIVITIES

C. Inspections (Enforcement)

2. Special Types of Inspections

a. School inspections and fire drills

b. Nursing, convalescent and oldage homes

c. Parade floats, party and dance decorations

3. Inspections Made by Fire Companies

a. In-service building inspections

Objectives:

(1) Obtain proper life safety
(2) Removal of fire hazards
(3) Adequacy and maintenance of fire proetction equipment
(4) Help owner understand and improve conditions
(5) Assemble facts about the building, contents, and exposures

b. Building Surveys (NOT A PREVENTION ACTIVITY)

Objectives:

(1) Collect information
(2) Familiarize firefighters with the property

c. Home Inspections

INSPECTION TECHNIQUES AND PROCEDURES

The Fire Inspector

A uniform cap and firefighter's badge do not by themselves make a oerson a fire inspector.

No person should be permitted to amke a fire inspection without special training in this field.

The useage of the term "fire inspector" in this unit has reference to either a fire prevention or fire company inspector.

Each of these terms is defined here to clarify their meaning and possibly a fire inspector know what is expected when inspections are made.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229

3-11 INSPECTION

3-11.1
3-11.2

Ref: pp. 289-301 #200
pp. 1-64 #110

TEACHING POINTS

INSPECTION TECHNIQUES AND PROCEDURES

Fire Prevention Inspector

A fire prevention inspector is an individual directly associated with a fire department, whose assigned duty is to inspect, or to be caused to be inspected, all buildings used by the public and to enforce, orcause to be enforced, all laws and ordinances of a community in accordance with existing laws.

Fire Company Inspector

A fire company inspector is any firefighter who, with other members of the company, makes inspections and submits written reports to the fire chief or the fire marshal. The company inspector is a part of an inspection team that collects valuable information for the fire department and reports hazardous conditions.

INSPECTIONS BY FIRE DEPARTMENTS

An inspection by fire department personnel should be a more thorough and complete inspection than one which is made by any other group.

A sketchy, walk-through inspection is not sufficient.

A firefighter becomes acquainted and more familiar with a building through inspections and the knowledge acquired is an aid to fire control.

In practically all municipalities, fire prevention work is the responsibility of the head of the fire department.

This work is in addition to fire fighting operations and is usually delegated to various fire personnel.

The manner by which this work is assigned and performed may vary with each jurisdiction, organization, and available personnel.

THE INSPECTOR'S EQUIPMENT

The equipment needed by an inspector to do a good job of inspecting may be divided into equipment at the fire statio and equipment at the place of inspection.

The recommended equipment which may be needed at these two places are as follows:

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. pp. 289-310

Ref: Fire Prevention & Inspection #110, IFSTA, 4th ed. pp. 1-229

3-11 Inspection

3-11.1
3-11.2

Ref: pp. 289-301 #200
pp. 1-64 #110

TEACHING POINTS

THE INSPECTOR'S EQUIPMENT

At the Inspection

- Neat coverall, suitable for crawling into attics and concealed spaces.
- A clipboard, inspection forms, and standard plan symbols.
- Materials for preparing sketches.
- Graph paper.
- 6-inch rule
- 6-foot tape.
- 50-foot tape
- Colored pencils
- Eraser
- A flashlight, because most concealed spaces are not lighted.
- A camera, equipped with flash attachment.
- A Pitot tube and gauges, where water flow tests are required.
- Reference books

At the Fire Station

- Special inspection forms
- Inspection reports
- Inspection manuals
- Adequate records
- Quiet place to work
- Sanborn map
- Inspection file
- Blank forms
- Graph paper
- Drawing board

INSTRUCTORS NOTES	TEACHING POINTS
Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. , pp. 289-310 Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229 3-11 Inspection 3-11.1 3-11.2 Ref: pp. 289-301 #200 pp. 1-64 #110 Occupancies such as theaters, night clubs and halls may require a part of the inspection to be done in the daytime and completed at night when the building is occupied. From a practical standpoint many inspectors find it practical and less confusing to start at the roof. The route should be systematically planned so that the inspector takes each floor as it comes	FREQUENCY AND TIME OF INSPECTIONS Based on hazard, required number of inspections and manpower. Wisconsin Administrative Code Requirements: Outside fire limits - Inspect semi-annually In fire limits - Inspect quarterly The Approach 1. The occupant should be pre-infomed of the purpose of the inspections and asked whether there are certain days when such inspections would be impracticable. (This action is not intended to establish a date for the inspection but is to avoid any harship that might be imposed on either the occupant dr fire personnel). 2. Inspections are usually made during normal business hours, but night inspections are sometimes necessary. 3. Request permission of owner or representative. 4. Ask for a guide to the premises. 5. Certain observations should be made before the inspector enters the property. These observations should include: a. location of fire hydrants, alarm boxes and exposures b. condition of streets and general housekeeping of area. (This is extremely improtant from the standpoint of fire apparatus response). c. record the type of buildings, occupancy and general appearance of the neighborhood. (This information will aid in recognizing any conflagration hazard that may exist). All this should be recorded in the inspector's preliminary notes before the property is entered. Making The Inspection 1. Use a system. 2. Return to tthe outside of the building and sketch the exterior walls.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA 4th ed., pp. 1-229

3-11 Inspection

3-11.1
3-11.2

Ref: pp. 289-301 #200
pp. 121-147 #110

Example: When the guide states "there is nothing in this locked room," the inspector may say "Yes, we understand, but it is not particularly the material in the room that we must see. The size, shape and construction of the room are important features."

This comment from the inspector does not directly doubt the word of the guide, and certainly the guide cannot deny that the rooms have size, shape and construction features.

The approach

Making the Inspection

3. Take notes and make sketches of each floor. These sketches should show:

   a. Construction
   b. Size
   c. Height
   d. Exposures
   e. Special hazards
   f. Mantraps
   g. Utility cutoffs
   h. Fire alarm, detection and protective devices
   i. Occupancy

4. Each floor should be inspected in succession and all areas including those that may be locked must be covered.

   The inspector should ask for the key to all locked rooms, closets or areas and tactfully explain the necessity of his entrance.

   If admission to an area is refused because of scientific research or secret processes, the inspector should suggest that a cover or screen be set up to permit the inspection.

   Secret areas from which the inspector or company inspection crews are barred Must be reported to the Chief of the Department for action.

5. If the property involves several buildings, each should be inspected separately.

   It is a good idea to start on the roof og the highest building from which the inspector can get a general view

6. The inspector should complete the sketch of each floor plan before proceeding to the next floor.

   If the inspector(s) is working from a floor plan that was made on a previous inspection, they can proceed more rapidly.

   They should make sure, however, to record any changes That have been made and change the floor plan sketc accordingly.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229

3-11 Inspection

3-11.1
3-11.2

Ref: pp. 289-301 #200
pp. 121-147 #110

Briefing the Responsible Occupant

Throughout the inspection tour the fire inspector should place special emphsis on fire prevention matters of local concern which are peculiar to the particular facility being inspected.

If the individual who accompanies the inspector is not well indoctrinated and is responsible for fire prevention, the inspector should sttempt to brief the individual concerning:

- The objectives and importance of fire prevention
- Fire reporting procedures
- Periodic fire drills (if applicable)
- Evacuation procedures
- Basic fire fighting techniques
- The recognition and elimination of fire hazards

A particularly valuable arrangement is to encourage management to contact the fire prevention bureau for briefing of newly appointed area fire marshals, safety and security officers, and building fire wardens.

This briefing may also be benificially extended to all new employees on a regularly scheduled basis.

Inspectors frequently schedule briefing sessions to coincide with the scheduled inspection.

During this briefing, operative personnel can be introduced to the six subjects listed above with special emphasis placed on hazards peculiar to their unique process or activity.

A fire inspector can determine the attitude throughout the inspection.

IF

the inspector is critical and negative in his approach,

THE

degree of cooperation and compliance that can be expected IS MINIMAL.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

4-11.5

Ref: pp. 289-301 #200
pp. 38-46 #110

The inspectors must always keep in mind the fact that their greatest weapon is the goodwill of the occupant.

If the occupant becomes convinced:

(1) that fire prevention laws and ordinances are not arbitrary;

(2) That he/she and the fire inspector are working toward the same goals;

(3) that the fire inspector is the person who is in a position to assist him/her in saving his/her property from fire, he/she will participate wholeheartedly in the elimination of fire hazards.

FIRE CAUSE

A "Fire Cause" involves three controllable conditions.

1. The Fuel Supply Hazard
2. The Heat Hazard
3. The Hazardous Act

A "fire Cause" occurs when a fuel supply hazard and a heat source hazard are permitted to come together in the presence of air or oxygen.

It is incorrect for fire department records to designate the cause of fire by indicating only one of these factors.

When the cause of fire is determined, both the fuel supply and heat source that caused ignition should be reported.

Fires do not start without cause and the cause is always present.

A Fire that resulted from an electric iron that was left connected, energized and unattended could be incorrectly reported by an uninformed firefighter.

The cause of fire report should read - fuel supply-ironing board; heat source - unattended iron.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

4-11.5

Ref: pp. 289-301 #200
pp. 38-46 #110

TEACHING POINTS

FIRE HAZARDS

A "fire Hazard" may be defined as a condition that will encourage a fire to start or will increase the extent and severity of the fire.

In order to prevent a situation from being hazardous, the

Oxygen Supply Hazard

Fuel Supply Hazard

and Heat Source Hazard

must be considered.

If any one of these hazards can be eliminated, a fire cannot occur.

The oxygen supply hazard is normally present, and very little control can be maintained over the oxygen supply except in special cases.

Fuel supply hazards and heat source hazards are more readil controlled.

If heat sources are kept separated from fuel supplies, the conditions will be safe indefinitely.

Some fuel supply hazards may be easily ignited and they may have some characteristics which make them dangerous from the standpoint of fire safety.

Any heat source hazard might be dangerous.

The following list of fuel supply and heat source hazards was taken from the NFPA Fire Protection Handbook.

FUEL SUPPLY HAZARDS

. Ordinary Combustible Solids

Wood, cloth or paper

. Flammable and Combustible Liquids

Gasoline, oils or Alcohol

. Combustible Gases

Natural, LPG, or manufactured

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection
4-11.5

Ref: pp. 289-301 #200
pp. 38-46 #110

TEACHING POINTS

FUEL SUPPLY HAZARDS

. Chemicals

  Nitrates, oxides, or chlorates

. Dusts

  Grain, wood, or coal

. Metals

  Magnesium, Sodium, or potassium

. Plastics

  Resins, casein, or cellulose

HEAT SOURCE HAZARDS

. Chemical Heat Energy

  Heat of combustion
  Spontaneous heating
  Heat of decomposition
  Heat of solution

. Electrical Heat Energy

  Resistance heating
  Dielectric heating

. Heat from Arcing

  Static electric heating

. Heat generated by lightning

. Mechanical Heat Energy

  Friction heat
  Heat of compression

. Nuclear Heat Energy

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

4-11.5

TEACHING POINTS

COMMON HAZARDS

A "Common Fire Hazard" is a condition which is prevalent in almost all occupancies and will encourage a fire to start.

Common fire hazards are listed in contrast to special hazards, which are usually peculiar to a given industry.

Some common hazards are:

. Housekeeping(Enviromental Control)

. Heating

. Lighting

. Power

. Floor Cleaning Compounds

. Packing Materials

. Fumigation and Insecticides

The term "common" could be misleading to some individuals.

It refers to the probable frequency of the hazard and NOT to the severity of the hazard.

Personal hazards are probably the most serious of all common hazards.

The term "personal hazard" covers all the individual traits habits and personalities of the people who supervise, work in, live in, or visit the property or building in question.

SPECIAL HAZARDS

A "Special Fire Hazard" may be defined as one which arises from the processes or operations that are peculiar to the individual occupancy.

Some examples of special hazards are:

. Painting

. Welding

. Flammable Liquids

. Processing Chemicals ,acids and dusts

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

4-11.5

TEACHING POINTS

SPECIAL HAZARDS

The widespread use of flammable liquids in

- dip tanks
- ovens
- driers
- mixing, coating, spraying and de-greasing processes

invoves a variety of special hazards.

Flammable gases are commonly used:

- as fuel

and for special purposes such as:

- welding and cutting.

Processing of certain materials such as:

- metal
- rubber
- cork
- fertilizer and
- drugs

produces flammable dusts which present explosion problems and spontaneous ignition.

TARGET HAZARDS

Target hazards may be defined as a facility or process which could produce or stimulate a fire that would involve a possible large life loss, a possible large fire loss a large concentration of materials that would burn rapidly or a concentration of materials of a high monetary value.

Some examples of TARGET HAZARDS are:

- lumber yards
- area shopping centers
- theaters
- Rows of frame tenements
- Flammable or combustible liquid bulk stotage
- hospitals
- Fur Storage Vaults
- schools

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA 1st ed., pp. 289-310
Ref: Fire Prevention & Inspection, #110, IFSTA 4th ed., pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

4-11.5

Ref: pp. 289-301 #300
pp. 38-46 #110

EXPOSURE HAZARD

An exposure hazard may be defined as "Property that may endanger other property or structures by fire whic may extend from the exposure hazard.

When inspecting a building, all nearby buildings, trash burning devices, or other similar items must be evaluated to determine the degree to which they amy be exposure hazards.

The location of the building being inspected is a major factor.

If it is in a highly built-up area, the exposure hazard would naturally be greater then if it were located in open, widely spaced areas.

Although a building may be isolated it may still have wood trim, combustible roofs, or other combustible materials which may easily be ignited from an exposure fire.

The primary consideration in exposure studies is the effect of radiant heat.

Factors which will affect minimum distances and protection criteria are:

(1) Construction

both the number of stories and the combustibility of the material involved;

(2) Occupancy;

(3) Area, square feet of space per floor.

Occupancies are classified as LIGHT, ORDINARY, or EXTRA HAZARD based on the concentration of combustible storage, the process involved and the number of occupants.

ELIMINATING FIRE HAZARDS

From one point of view there is no such thing as a minor or major fire hazard since all hazardous conditions and acts must be eliminated if the fire toll is to be reduced.

Experienced fire inspectors, however, realize the immediate consequences of some conditions and acts are more or less pressing and severe than others. There is obviously no clear line of distinction between what constitiutes a minor or major fire hazard.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1
3-11.2
3-11.3
2-11.4

4-11 Inspection

4-11.5

TEACHING POINTS

ELIMINATING FIRE HAZARDS

Minor Fire Hazards

Fire hazards which might be considered less serious in nature are those which involve:

1. limited POSSIBLE loss consequences to LIFE, PROPERTY or PRODUCTION.

These may also be considered minor hazards in that there is no probable loss of life to the firefighter.

Major Fire Hazards

Fire hazards which involve major violations or deviations, the imminent or possible consequence of which includes:

1. serious LIFE, PROPERTY or PRODUCTION loss are known as major fire hazards.

Structure Conditions

A program of maintenance is necessary for fire proetction features built into a structure.

A structure can detiorate in time to produce hazardous fire conditions.

Some common fire hazards found instructures, apart from those caused by personnel actions or operations are:

- Inaccessible under floor spaces
- Large undivided spaces in attics, cock lofts and false ceilings
- Lack of enclosure for under stair locations
- Cracks between floor boards or openings caused by shrinkage or expansion
- Breaks or openings caused by shrinkage or expansion in partitions, walls or ceilings
- Open spaces around ducts or pipes which pass through ceilings, walls or floors
- Flammable or highly combustible paints or finishes on interior and exterior surfaces

Trash and Waste Disposal and receptacles

The efficient and timely collection and proper removal of al trash or waste from a facility should be the responsibili of a designated person working within the building.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

3-11.5

Ref: pp. 289-301 #200
pp. 121-147 #110

Trash and Waste Disposal and Recpectacles

Waste disposal, trash receptecales and trash collection points should be checked for:

- Noncombustibility of construction.
- Sufficiency in number and convenience of location.
- Hazardous location (should not be directly under combustible objects, near heating equipment, or flammable liquids.
- Overfilling.
- Disposal of unauthorized objects (smoking material, oily rags, etc.,) in trash receptacles.
- Frequency of trash removal to the outside of the facility (as neede - at least daily).
- Location of disposal site outside the facility.
- Self-closing, tight-fitting lids plainly marked with the name of the contents for industrial waste receptacles.
- Accumulation of filings, dust, chips, droppings and by-products within, near, or surrounding the producing Unit(s).
- Soilage or impregnation of facility structure (floors, walls, ceilings, drains, etc.,) or area surrounding equipment with flammable liquids, fuel by-products, hazardous chemicals and dust.
- Air-tight lids on oily waste cans. Cans supported by legs or base so that the bottom is several inches off the floor.
- Accumulation of dust on ledges, beams, and other surface
- Incinerators used to burn small amounts of trash or waste. They should comply with the Incinerator Institute of American Standards and state and local codes or ordinances for their particular classification.
- Proper disposal of hazardous materials such as explosive petroleum products and solvents.
- Removal of grass or weeds a sufficient distance from facility or storage areas to prevent fire spread.

INSTRUCTORS NOTES

TEACHING POINTS

Ref; Essentials of Fire Fighting, #200, IFSTA, 1st ed. , pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

4-11.5

Ref: pp. 289-301 #200
pp. 121-147 #110

General Storage

Determine if both inside and outside storage facilities are used.

These points of inspection will aplly to any type of storage facility, unless so stated.

General Storage should be checked for:

Stacked material within 18 inches of electrical fixtures.

Stacked material more than 15 feet high or of unusually hazardous material piled closer than 36 inches to sprinkler heads.

Stacked material piled closer than 18 inches to sprinkler heads.

Stacked materials which project into aisles or passageways.

Material stored against the exterior of buildings, agains doors or exits, or under stairways.

Boiler or heating rooms used for any type of storage.

Containers of gasoline, gas, oil, dope, paint, or varnish open, leaking, or stored in locations where they could be ignited by spark, flame or other sources of ignitic

The Use of Approved Safety Cans

. With self-closing valve or cap.

. To store or transport small amounts of flammable liquids.

. Self-venting.

. When turned over do not cause danger because of spilling.

. Equipped with a flash-back spark arrester.

Flammable Liquid or Paint

. Kept in closed containers.

. Storage for flammable liquids plainly marked to warn of dangers.

. Flammable liquids at safe distance from sources of ignition.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

4-11.5

Ref: pp. 289-301 #200
pp. 121-147 #110

TEACHING POINTS

Flammable Liquid or Paint

. Storage and distance criteria within limits specified by state and municipal codes and ordinances or National Fire Codes.

Gaseous Cylinders

. Secured by chain or fastener.

. In well-vented rooms.

. Separated from heat producing appliances and ignition.

. Oxygen cylinders not placed in acetylene generating rooms.

. Empty cylinders plainly marked and kept apart from full cylinders.

Smoking

Where there is an obvious danger, restrictions on smoking are accepted as reasonable and rules are usually observed.

This is also true where there is a potential loss of life by fire, as in theaters and places of assembly.

It may be more difficult to prohibit smoking in locations where huge values are exposed.

Examples are various types of:

Stores
shipping rooms
lumber yards
warehouses
piers
storage vaults
museums

discarded cigareetes, matches and other smoking materials are a recognized cause of fires in this type occupancy.

A general requirement is to provide safe areas containing ashtrays that are not easily tipped over but that are not so large they will be used for waste baskets.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229

3-11 Inspection

3-11.1

4-11 Inspection

4-11.5

Ref: pp. 289-301 #200
pp. 121-147 #110

TEACHING POINTS

Smoking

They should be emptied frequently into self-closing, safety type containers.

Areas where smoking is prohibited should be marked with signs explaining the hazard.

These situations include areas where there are:

- dangerous explosives
- dangerous chemicals
- dangerous substances

that are stored or handled.

Areas where:

- flammable vapors
- combustible dusts or fibers
- quick-burning combustibles

may be stored or used.

Two kinds of signs are generally acceptable for marking smoking areas:

- SMOKING PROHIBITED IN THIS AREA

or

- DESIGNATED SMOKING AREA

Electrical

If properly designed, installed, and maintained, electrical systems for lighting, power, heating and other purposes are safe.

Electricity may become the fire cause or fire hazard through:

Arcing or overheating

of electrical equipment.

It presents a casualty hazard through

burns, shock or falls

as a result of shock when contact is made with live parts.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1
4-11 Inspection

4-11.5

Ref: pp. 289-301 #200
pp. 121-147 #110

5-6.14

NOTE: AWG (C) is American Wire Gauge (Copper) and AWG (A) is American Wire Gauge (Aluminum or Aluminum or Copper Clad Aluminum)

Electrical

To minimize these hazards, only suitable and safe materials which have been tested and listed by a recognized testing laboratory should be used. (UL, FM, etc.)

Overloading electrical circuits is extremely dangerous and must not be permitted at any time.

All electrical must be equipped with fuses, circuit breakers, or other accepted means to prevent accidental or intentional overloading.

Some of the most common electrical hazards for which a fire inspector should be on the alert are:

- Protection not adequate for the particular equipment or conductor.
- Oxidation or discoloration of protective devices indicates overloading or improper fusing.
- Protection greater than that which the circuit is designed to safely carry.
- Wire, foil, solder, coins, or the like must not be used in place of a fuse.
- All electrical fuse, switch and circuit breaker boxes should be plainly marked with the voltage.
- Loads in circuits should not exceed the following for noncontinous connected loads.

  15 amperes for 14 AWG(C) and 12 AWG(A)
  20 amperes for 12 AWG(C) and 10 AWG(A)
  25 amperes for 10 AWG(C) and 8 AWG(A)
  30 amperes for 10 AWG(C) and 8 AWG(A)
  35 amperes for 8 AWG(C) and 6 AWG(A)
  40 amperes for 8 AWG(C) and 6 AWG(A)
  45 amperes for 6 AWG(C) and 4 AWG(A)
  50 ampers for 6 AWG(C) and 4 AWG(A)
  60 amperes for 4 AWG(C) and 4 AWG(A)

- Cabinet or box doors not closed.
- Combustible materials in electrical fixture enclosures.
- Mobile home service panels (interior) not equipped with tamper resistant type "S" plug fuses or fuseholders.
- Tampering with equipment.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1

Ref: pp. 289-301 #200
pp. 121-147 #110

5-6 Inspection

5-6.14

TEACHING POINTS

STATIC ELECTRICITY

Static electrical charges may be produced by friction, electrostatic induction, and the the process of conatct and separation.

Static electricity cannot be prevented but it can be controlled by bonding and/or grounding.

BONDING

Bonding does not necessarily eliminate static electricity or prevent the accumulation of static electricity.

It simply permits the even distribution of electricity between items that are connected by a common bond.

A fire inspector must be able to recognize;

- what a bond is;
- when a bond is necessary;
- where a bond should be made;
- why a bond should be made.

A bond is a conductor between system components to equalize the static charge.

Bonds must be applied on clean, unpainted surfaces.

Bond wires must have adequate capacity to carry the largest currents that may be anticipated for the particular installation.

GROUNDING

Grounding mens to provide an electrical path to ground (earth).

The points at which a "bond" connects to objects or components are called "grounds".

Static ground cables must be connected first to the object and then to the ground.

A ground is a conductor between sysmtem components and earth

Grounds must be applied on clean unpainted surfaces.

Ground wires must have adequate current carrying capacity.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.1

Ref: pp. 289-301 #200
pp. 121-147 #110

Reference NFPA 89M Clearances, Heat Producing Appliances

HEATING UNITS

For inspection purposes, heating units may be grouped into three categories by the amount of heat they produce.

These groups are:

(1) LOW - up to 600 degrees F.

(2) MEDIUM - 600 - 1,500 degrees F.

(3) HIGH - above 1,500 degrees F.

The main hazard concerning heat producing appliances is the clearance between the heating unit and combustibles.

A general rule to follow concerning clearances is that no heat producing appliance should raise the temperature of a combustible from 70 degrees F. to the maximum of 160 degrees F., or a raise of 90 degrees F.

At points where pipes emerge from a floor, wall or ceiling, the clearance at the opening through the finish floor boards or wall or ceiling boards may not be less than 1/2 inch.

Each opening shall be covered with a noncombustible plate.

Small branch lines may have a 3/8 inch clearance.

Steam pipes carrying steam at pressures above 15 but not over 500 psi shall have a clearance of 6 inches.

Hot water and steam pipes with steam pressure not over 15 psi shall have a clearance of 1 inch.

Firestopping with flame resistant sray-on material can be accomplished where pipe penetration in floors create a hazard.

4-11.5

ON-THE-SPOT CORRECTIONS

A reasonable percentage of fire hazards can be corrected on the spot while the fire inspector is present.

Fire inspectors should encourage operative personnel to take whatever actions are necessary to affect the correctior of violations while they are in the area.

On-the-spot corrections should not be eliminated from the inspection report.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevetion & Inspection #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.5

Ref: pp. 289-301 #200
pp. 121-147 #110

TEACHING POINTS

ON-THE-SPOT CORRECTIONS

A record of such discrepancies, even though minor in nature or easily corrected, is necessary for several purposes.

Such discrepancies may show the development of a trend toward either

repeat hazards or occupant attitudes

that might develop into hazards of a more serious nature.

The correction of hazards duirng an inspection tour should be reported to management during the closing interview.

A report of positive progress is a good note on which to begin the discussion of other more costly or serious hazards.

A competent fire inspector will use a systematic observation technique.

The inspectors will develop their own technique of categorizing structural, occupancy, and processing features

In many instances the inspectors will have the appropriate NFPA stanadrds, state codes or city ordinances with them for ready reference; in other situations they will want to copy down all the particulars on a note pad and conduct their research upon return to the office.

If a hazardous condition or act is discovered, the consequence of which is immediately imminent and serious, the inspector should attempt to have the condition or the act discontinued and report the discrepancy to management.

An example of such a hazard would be a source of ignition in a flammabe gas contaminated atmosphere.

It is imperative that this type hazard be corrected on the spot.

All hazards must be recorded at the time of their discovery and reported on the inspection report.

Hazards which were corrected on the spot, however, need not be listed in the "Corrective Action Required" section of a report.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA 4th ed., pp. 1-229

4-11 Inspection

4-11.1
4-11.2

Ref: pp. 289-301 #200
146-169 #110

Refer to Handouts #1 & 4

MAP AND SKETCH MAKING

Maps that convey information in readily legible form relative to construction, fire prevention occupancy, special hazards and other details of buildings, are available for fire protection and fire insurance agencies.

Maps of this nature are usually prepared by map companies and standard map symbols are used universally.

The use of map symbols enables engineers, fire department inspectors, plant protection men, insurance representatives municipal employees, and other associated persosns to read any map intelligently.

A fire inspector may learn the standard symbols ahead of time or may carry a copy, referring to it when necessary.

Much useful information is provided in these maps for public and private fire protection.

Perhaps the best use the fire department can make of such mapes is in the pre-fire planning of target hazards.

The symbols can be studied and learned quickly, after which it is relatively simple to determine the

- construction
- area
- height
- protection against exposures
- occupancy
- special hazards
- and other details of buildings and areas.

An inspection that is made by a fire department inspector should include some sort of a sketch to show the general arrangement of the property with respect to streets, other buildings, and important features that will help fire fighters plan their actions.

This sketch is commonly called a plot or plan of the area.

Making plot plans ofetn saves time for the inspector.

Information That can be very easily shown on a sketch make require several hundred words of wriiten description.

An inspector's sketch of an area frequently consitutes the most informative part of an inspection report and should be made with neatness and accuracy.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA 4th ed., pp. 1-229

4-11 Inspection

4-11.1
4-11.2

Ref: pp. 289-301 #200
pp. 146-169 #110

Refer to Handouts # 2 & 4

Refer to Handout #3

MAP AND SKETCH MAKING

A sketch that is made during inspection may be done freehand with the aid of a clipboard and 6-inch rule.

The most convenient and practical paper to use is cross section graph paper.

Each large square may represent any number of feet depending on the size of the building and the grounds.

From the inspector's sketch and notes a permanent drawing can be made to be filed for future reference and classroom study.

The floor plan consists of an outline of each floor of the building.

By using standard symbols, the inspector can show the type of

- construction
- thickness of walls
- partitions
- openings
- roof types
- parapets
- protection devices
- water mains
- valves

and other miscellaneous items can be included.

A sectional elevation sketch of a structure consists of a cross section or cutaway view of a praticular portion of a building along a selected imaginary line.

The easiest section view to protray is to establish the imaginary line along an exterior wall.

This location theoretically removes the exterior wall and exposes such features as

- roof construction
- floor construction
- parapets
- basements
- attics

and other items that are difficult to show on your floor plan.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA 4th ed., pp. 1-229

4-11 Inspection

4-11.1 3-11.2
4-11.2

Ref: pp. 289-301 #200
pp. 147-169 #110

TEACHING POINTS

CLOSING INTERVIEW

To leave the premises without consulting with the person who gave permission to inspect the property might give the impression that the inspection did not take long and that it was an unimportant venture.

A report to the person with authority, after an inspection, can do much to secure the cooperation of the owner toward matters that need attention.

During this interview a fire inspector should first comment favorably on the good conditions that were found and on the excellent cooperation of occupants in correcting minor hazards on the spot.

Let it be known that these good points will certainly be contained in the inspection report.

Unfavorable conditions or hazards that have to be corrected should be discussed in general, but the inspector should avoid technicalities and direct conclusions at this time.

The inspector should explain that such conditions will be studied more fully and that recommended solutions will be submitted in a written report.

Too much talk concerning unfavorable conditions may give the impression of petty fault-finding and lead to an argumentative discussion.

A final interview also gives the inspector an opportunity to express thanks for the courtesies extended to the fire department and opens the way to explain how firefighters will study these reports from the standpoint of fire fighting procedures.

WRITING A FORMAL INSPECTION REPORT

A fire inspection of any sort must be reported, but data and violation collected during the majority of inspections are usually recorded upon an inspection form or checklist.

Such forms often provide a means by which violations and recommendadtions can be made available to owner or occupant.

There are however, conditions under which it would be best to write a formal inspection report.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.2

Ref: pp. 289-301 #200
pp. 147-169 #110

WRITING A FORMAL INSPECTION REPORT

Some of these conditions include:

- When a specific life hazard exists.
- When there is a considerable high value.
- When there is a large target hazard.
- When there are multiple hazard processes.
- When questionable conditions are found.
- When controversial issues exist.
- When multiple copies are needed for Board action.
- When an owner/occupant is uncooperative.
- When legal action may be anticipated.
- When a specific agreement has been made.

Ordinarily, general fire inspections can be effectively conducted, recorded and reported by using a prearranged inspection form or checklist as previously mentioned.

An inspection report makes it possible to relate informatio back to the owner and/or occupant.

Facts obtained by an inspector must be classified, arra d examined, interpreted, and reported before a report can be written.

The contents of a report should:

(1) Inform

(2) Analyze

(3) Recommend

A presentation of analyzed facts is necessary for all decisions requiring action.

Effective communications through reports is an integral part of successfully operating any unit of government or business.

Inspection report writing is generally classified as "argumentative exposition."

Such reports are generally concerned with the presentation of facts and evidence to prove a point, draw a conclusion, or justify a recommendadtion.

The argument must be calm, reasonable and presented in a positive business like manner.

The argument should not be opinionated, biased,emotional or unfair.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.2

Refer to Handout #6

WRITING A FORMAL INSPECTION REPORT

Evidence presented must be weighed and evaluated and the reasoning must lead to sound conclusions.

In this manner, the reader can be convinced of the validity of the proof and will be motivated to accomplish the action suggested in the report.

An inspection report should include a title or cover page in addition to the main body of the report.

A cover page adds an appearance of dignity and importance to the report.

Refer to Handout #6 for a sample report.

The usage of the word "FOR" preceding the name of the occupant points out that a SERVICE has been performed by the fire department.

If the report is prepared for the woner of a property instead of the occupant, the name and arrangement should be changed accordingly.

Following the cover page, the report may contain a letter of transmittal

This letter should be written to the individual whose name appears on the cover and it should be signed by the fire chief or the fire prevention officer.

This letter should be brief and should contain only general statements concerning the inspections plus appreciation for the courtesies extended during the inspection.

The body of the report should contain general information, specific infonmation and recommendations.

The recommendations must contain the "HOW" instructions, and they must be specific and clear enough for workmen to understand.

A sample outline for the body of a report follows:

GENERAL INFORMATION

Name or property (business name).
Date of inspection.
Location of property and street relative to other streets and buildings.
Name, address, and telephone number of persons to be notified in case of fire.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229

4-11 Inspection

4-11.2

Ref: pp. 289-301 #200
pp. 147-169 #110

WRITING A FORMAL INSPECTION REPORT

GENERAL INFORMATION

Classification of exposures to building (grade as severe, moderate or light).
Storage of new and finished stock and general processes carried on.

SPECIFIC INFORMATION

Life hazard - day and night, exit facility, etc.,.
A list an evaluation of common hazards, light power, heating, housekeeping.
A list an evaluation of special hazards.
A list of existing fire protection equipment by type, size, number, location, and condition.
General summary of other conditions found such as:
- Information for fire department
- Fire prevention activities in which occupants participate
- Information of special interest
- Value concentration - dollar per square foot (estimated)
- Fire load - Btu per square foot (estimated)

RECOMMENDATIONS

List the common hazards, give definite corrections for each, and a short explanation of recommendations.
List the special hazards, explain how to eliminate, isolate, or protect, and why this is necessary.
List additional fire protection equipment needed; type, size, amount, and desired location.
Specify U.L. listed equipment.
If alterations or corrections are necessary, make the instructions specific enough for workmen to understand.
Recommend repairs should be made by tradesmen ACCORDING TO THE CODE.
Avoid genreal recommendations such as: Re-wire the building - have the heating system checked by technicians and the like.

Do not make recommendations that YOU would not carry out if it were your building.
Write the report in third person (the code recommends, or it is recommended - not I recommend).
The only place for your name is where you sign it.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.2

Ref: pp. 289-301 #200
pp. 147-169 #110

WRITING A FORMAL INSPECTION REPORT

RECOMMENDATIONS

Recommend that fire safety committees be set up including the appointment of a building fire warden who is responsible to conduct exit drills, enforce safety practices, and to coordinate with the fire prevention bureau.
A recommendation concerning the purchase and installation of an alarm system, sprinkler system, steel fire escape, or other fire protection equipment must be backed by sound reasoning, good business practices and code requirements.

An example of a page from an inspection report is illustrated in Handout #6.

This example gives the specific location of the hazard, a clear description of same, and then recommends how this hazard can be remedied.

One copy of the report, the original, should be directed to the property owner or the occupant.

Another copy should be filed by the fire department and sufficient copies should be provided for each fire company that is affected.

The report should include a plot plan of the area, a floor plan of the building, general and specific information, and recommendations.

FOLLOW-UP INSPECTIONS

A follow-up inspection should be made by a representative from either the fire prevention bureau or the fire chief, and the representative should first go to the person to whom the report was written to discuss the mission.

To enter the property without this contact gives the impression that the inspector is snooping or trying to catch them in an act.

Being fair and aboveboard in all dealings will pay dividends

In the fire hazard inspection report, a time and date should be established for a follow-up inspection.

The purpose of the follow-up inspection is to insure the fire prevention bureau and the occupant that recommendations have been complied with to the full intent of the applicable criteria, and that the property is reasonably fire safe.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp.289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.2

Ref: pp. 289-301 #200
pp. 147-169 #110

TEACHING POINTS

HELPFUL TIPS

Ther are many minor, but useful, items that an inspector should know to make the job easier.

The following partial list is offered to help the individual as a member of a fire company or as a fire inspector.

Testing Vents For Draft

Where vents are provided for noncombustible fumes or smoke, they should be tested to see if there is an adequate draft.

This may be done by blowing tobbaco smoke underneath the vent hood.

By observing the flow of smoke one can determine if the vent is working properly. If the draft is strong enough, it might be tested by the movement of a handkerchief.

Checking Size Of Electrical Wiring

The size of wire is one of the factors used to determine the size of overcurrent protection, which may be a fuse or circiut breaker.

It is difficult to be able to accurately judge the size of wire by merely looking at it.

Commercially-prepared wire gauges are available to check the size.

Another method is by association.

A small leather case with samples of the common wire sizes can be made up and by comparing the installed wire with the samples, the actual size can be reasoned.

Selecting The Correct Time For Inspection

In public assemblies, a complete inspection should be made when the building is empty.

A check should also be made when it is in use.

In eating establishments, avoid rush hours; same applies onbargain days or sales in stores.

ALWAYS let good judgement be the guide for selecting the correct time to inspect any type of occupancy.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.2

3-11.2

R ef: pp. 289-301 #200
pp. 147-169 #110

HELPFUL HINTS

Entering The Building

NEVER inspect a building without permission of the management.

First identify yourself properly and ask, do not demand, permission to inspect.

(Example statement: Your fire department is interested in your fire safety and we would like your permission to inspect your property).

Then, request a management representative accompany you because it shoes courtesy, is a source of information, and serves as a guide.

Questions

DO NOT be hesitant to ask questions concerning the operation of the business or plant.

This will show one does not desire to bluff, it will help to gain cooperation from the firm.

Recommendations

MAKE suggestions or recommendations only to those with authority.

Technical recommendations should be made AFTER you have returned to the station and have had time to consult standards and other sources of expert advice.

Do not ever break a promise, but always follow through.

Check the recommendations by asking these questions:

Is the recommendation fair ?

Can it be enforced ?

Will the same recommendation be enforced on all other buildings in the community ?

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.2

4-11 Inspection

4-11.2

Ref: pp. 289-301 #200
pp. 147-169 #110

3-11 Inspection

3-11.3

HELPFUL HINTS

Final Interview

THANK the manager or other person in charge.

CONGRATULATE him/her on any good conditions found.

DO NOT give the impression of petty fault finding.

Reinspections

Reinspections are VERY important for gaining results.

They should be MADE promptly at the time given to correct the hazard.

Reinspections are a means to emphasize enforcement and sincerity of the program.

Telephone

AVOID using the telephone in preference to face-tofac discussion.

When necessary, always use a pleasant tone of voice.

Be courteous and use caller's name frequently.

PUBLIC RELATIONS

TACT and diplomacy usually gain results.

AVOID using legal action if possible.

ALWAYS discuss recommendations and their advantage to the firm with the top person in the organization and follow up with a written recommendation.

Inspections are a means of selling;

.. the fire department;

.. the program

.. and oneself to the public.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-301

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 1-229

3-11 Inspection

3-11.2

4-11 Inspection

4-11.1
4-11.2

Ref: pp. 289-301 #200
pp. 170-186 #110

TEACHING POINTS

FIRE COMPANY SURVEYS AND INSPECTIONS

BUILDING SURVEYS BY FIRE COMPANIES

Fire company surveys are conducted for two,purposes:

1. This procedure is the best and most thorough way to collect information.

2. It acquaints firefighters with the property in question.

This technique means that firefighters in a district should be taken to the property where they conduct a complete and thorough survey.

From the information obtained by the fire company surveys and from previous inspection reports and diagrams, definite pre-fire plans for effective firefighting can be laid out and studied by the officers and personnel of the various fire companies.

Diagrams, maps and notes are very valuable to a fire department administrative staff in pre-fire planning.

Objects of building surveys include:

- Becoming aware of fire and life safety conditions.
- Checking adequacy of installed private fire protection equipment.
- Assembling facts concerning the building, its exposures and contents.
- Helping the owner and/or occupant understand the importance of the survey.

Pre-fire planning should not be rushed.

These surveys do not need to be concluded the same day they are begun.

Accurate and feasible pre-fire plans depend upon information that is obtained by firefighters during these surveys.

This information concerns structural features, general occupancy, tactical vantage points, private fire protection facilities and exposure problems.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp, 1-229

3-11 Inspection

3-11.2

4-11 Inspection

4-11.1
4-11.2

Ref: pp. 289-301 #200
pp. 170-186 #110

Refer to Handout #5

TEACHING POINTS

BUILDING SURVEYS BY FIRE COMPANIES

Some of the information that is essential to effective pre-fire planning follows:

Location of stairways and elevators
How entrance can be made into the building
Obstructions provided by partitions and merchandise
Stregth and fire resistance of floors, stairs and ceilings
Extent and need for salvage work
Potential life hazard to occupants
Features that limit proper ventilation
Need for protective breathing equipment
Location of quick-burning material
Location and types of fire escapes
Potential danger of water absorbtion in stock
Location of overhead and outside obstructions
Location of skylights and other roof openings
Location of mantraps
Location of toxic and radioactive materials
Types of private protection devices
Location of sprinkler and standpipe connections and equipmen
Location of utility cutoffs
Means of removing water from buildings
Location of fire doors, fire walls, curtain boards and bulkheads
Acessibility of windows
Exposure hazards to and from other buildings
Special evacuation features
Location of flammable liquids, hazardous processes and materials

If the survey is being conducted for the development of a standard operation procedure for an area, individual occupancy surveys are helpful, but they may not be essential to the overall picture.

In this case an outside survey covering one or more blocks in a particular district, may supply the needed information.

Outside surveys are also essential for the comilation of complete information concerning a pre-fire plan for a specific target hazard.

Outside surveys include information pertaining to such items as:

streets
alleys
driveways
bridges
street hydrants
yard hydrants
sprinkler and standpipe connections
valves
parking lots
water supply

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.2

4-11 Inspection

4-11.1
4-11.2

Ref: pp. 289-301 #200
pp. 170-186 #110

Refer to Handout #1

TEACHING POINTS

BUILDING SURVEYS BY FIRE COMPANIES

Surveys are usually conducted on large buildings, target hazards and other locations of special interest.

After a survey is completed and a pre-fire plan made, it can easily be kept up to date by inspection reports and additional company surveys.

SURVEY MAPS AND REPORTS

A survey map is a drawing which is made during a fire company survey that depicts actual conditions at a building or facility.

A survey map is actually a record map, and it can be drawn by any capable person.

The important factor is that this map must be made during a fire company survey.

There is a difference between a survey amp and the amp that becomes a part of pre-fire plans.

A survey map is a sketch or drawing that is made in the field during a company survey, which will be used during the planning sessions to develop pre-fire plans.

Since survey maps are made to record information, it may be necessary, in some instances, to make individual drawings of the various floors of a building in order to show the information needed for pre-fire planning.

A survey map should show all items that pertain to the protection of life and property from fire and it should include information concerning:

- water mains and supply
- hydrants
- protection devices
- passageways

Making a survey map is the act of placing on paper a picture of conditions as they are found.

A permanent map for pre-fire planning may be drawn to scale from a survey map.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp 1-229

3-11 Inspection

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4-11.2

Ref: pp. 289-301 #200
pp. 170-186 #110

BUILDING INSPECTIONS BY FIRE COMPANIES

Building inspections described here include buildings in all classes of occupancies except residential or portions of other buildings used as a residence.

A fire department may, with the proper legal procedures, demand entrance into any building or portion thereof that is not a residence or classified for security reasons.

The purposes of building inspections are listed below and each is explained in detail along with things to look for and sources of aid.

- To Obtain Proper Life Safety Conditions
- To Keep Fires From Starting
- To Check Adequacy and Maintenance of Fire Protection Equipment
- To Assemble Facts Concerning the Building and the Contents
- To Help the Owner or Occupant Understand and Improve Existing Conditions

To Obtain Proper Life Safety Conditions

The portion of the inspection concerned with life safety conditions includes the adequacy of exits.

Instructions for determining the adequacy of exits may be found in any of the following NFPA publications:

NFPA Inspection Manual
NFPA Fire Protection Handbook
The National Fire Codes
Life Safety Standard No. 101
and the Wisconsin Administrative Code.

Items that may be included in checking for the life safety conditions are:

- operation of any panic hardware
- the direction of door swing
- handrails on all stairs
- operation of emergency exits
- obstruction in aisles, stairways, smoke towers and halls
- physical condition and maintenance of fire escapes and fire exit lights.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

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Ref: pp. 289-301 #200
pp. 170-186 #110

TEACHING POINTS

BUILDING INSPECTIONS BY FIRE COMPANIES

To Obtain Proper Life Safety Conditions

While the word "Exit" is suitable for the conventional passage normally used for outgoing traffic, the words "Emergency Exit" should be posted above the means of emergency egress.

The public will generally fail to appreciate the purpose of an emergency door unless it is adequately marked.

Exits should be checked by the survey team to assure that the emergency exit is not blocked or that the panic bars are not locked.

To Keep Fires From Starting

Keepinf fires from starting requires a broad understanding of a wide variety of conditions.

Fire hazards vary very widely with each occupancy, but the items to be checked are common.

Among these are:

housekeeping (inside and Outside)

disposal of waste materials

custodians closets

chimneys or flues

provisions for the safe handling of smoking materials and matches

proper clearance of heating appliances

proper installation of electrical circuits, fuses, electrical equipment and air conditioning systems.

To Check Adequacy of Fire Protection Equipment

Fire protection equipment can be divided into five extinguishing equipment devices to limit the spread of fire, fire detection and alarm equipment and water supply.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp 1-229

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Ref: pp. 289-301 #200
pp. 170-186 #110

BUILDING INSPECTION BY FIRE COMPANIES

To Check Adequacy and Maintennace of Fire Protection Equipment

A check of the fire extinguishing equipment includes:

- fire extinguishers
- fire pails
- inside hose systems
- hose houses and equipment
- standpipes
- fire department connections
- sprinkler systems
- chemical extinguishing equipment

Items to check under devices to limit spread of fire include:

- fire doors
- wired glass
- fusible link, dampers in air conditioning ducts and shafts
- fire shutters
- metal window frames
- fire walls, parapets and bulkheads

A check on fire detection and alarm equipment includes:

- types of systems
- heat actuating devices and supervision
- how and to whom alarms are transmitted

Extra water supply to fight a fire in the building should also be recorded.

Extra supply includes:

- fire pumps in other buildings
- swimming pools
- lakes
- cisterns
- ponds
- streams

or any unusual source of water.

Items related to the control of utilities can best be cataloged during an inspection, and these items are very important information when fighting a fire in a building.

Some examples are:

- Air conditioning equipment controls
- main gas valves
- Main electrical control switch
- transformers

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

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Ref: pp. 289-301 #200
pp. 170-186 #110

TEACHING POINTS

BUILDING INSPECTION BY FIRE COMPANIES

To Assemble Facts Concerning The Building and The Contents

Facts concerning the building and the contents may be gathered by following four subdivisions under this phase of inspection.

1. Obtain detailed information concerning the building construction and occupancy.
2. Note all exposures.
3. Assemble facts that are useful in fighting fire in the building.
4. Gather information that may be sueful in fire investigation after a fire.

Under building construction and occupancy, the items to be covered include:

street address	name and address of owner and/or
business name	-ccupant
of the building	number of stories
width and length	width of streets and alleys
of the building	building classification
age and state of	the interior finish
repair of building	the interior layout
the fire load due	value concentration due
to contents	to contents and occupancy

In noting exposure to the building that is being inspected, the firefighter should gice compass direction, the distance the height, the construction and the occupancy.

It is also well to note whether there are any grass or weed or combustible materials of any kind that would form a path for a fire to travel from the exposure to the building being inspected.

Efficient fire fighting requires a detailed knowldeg of the building in which the fire is being fought.

This knowledge is an important part of any fire company inspection.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

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Ref: pp. 289-301
pp. 170-186 #110

BUILDING INSPECTION BY FIRE COMPANIES

To Assemble Facts Concerning The Building and The Contents

Carefully note anything that would delay response of fire apparatus such as:

locked gates
unusual traffic conditions
bridges
railroad crossings

The best means of entrance into a building can usually be determined during an inspection.

Such things as:

cast iron knock-out panels

difficult doors

or unusual means of entrance should be reported.

A fire company inspector should also look for conditions that will affect rescue.

Such conditions include:

unusual sleeping accomodations
emergency exits to the roof
bridging posibilities

and any other conditions that would be a help in rescue practices.

Mantraps or danger areas should always be reported in a fire department inspection report.

Any unusual conditions should be noted:

unguarded elevator shafts or pits
the storage of nitrocellulose materials
the generation of toxic or flammable gases
overloaded floors
stock that will absorb water readily
unsafe construction
overhead wires or obstructions of any sort

and the location recorded.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

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Ref: pp. 289-301 #200
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TEACHING POINTS

BUILDING INSPECTION BY FIRE COMPANIES

To Assemble Facts Concerning The Building and The Contents

Other items frequently determined and recorded during a fire company inspection are permanent roof openings, the parking of elevators at night, and other pertinent conditions.

Information that will make salvage operations more efficient during fire fighting can often be obtained during a fire company inspection.

The location of high values in the most important.

High values include:

important records
high value stock
fragile stock
stock that is highly susceptible to water damage

Other important items pertaing to salvage include the location of

floor drains
emergency drains
and scuppers

To Help The Owner Or Occupant Understand And Improve Existing Conditions

The owner should be informed of minor items that could be changed thereby eliminating a fire or safety hazard.

Special hazards should be reported to the fire prevention division for their consideration and additional action as needed.

The development of a favorable attitude of the owner and/or occupant toward fire prevention should be one of the main goals.

Much fire prevention work can be accomplished through fire company inspections but it does not reduce the need for specially trained personnel to carry on fire prevention and conduct inspections of a technical nature.

Information that is obtained by firefighters concerning the structural features, general occupancy and private protection will do the most good if it is made available to the various fire companies and used to revise pre-fire plans.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

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Ref: pp. 289-301 #200
pp. 170-186 #110

TEACHING POINTS

BUILDING INSPECTIONS BY FIRE COMPANIES

The following suggested items may serve as a guide when one is writing this informative report for fire department use and also as a review before making an inspection.

Other items may need to be added to conform with local conditions.

Fire Apparatus Response

Items such as locked gates, one way streets, railroad crossings, fences, bridges and others.

Fire Protection

Items such as hydrant locations, other water supplies, exposures, sprinkler and standpipe connections and other private protection.

Forcible Entry

Items such as best means of entrance, cast iron knock-out panels, openings to be avoided and others.

Ventilation

Items such as permanent roof openings, night elevator parking, exposures and others.

Self-Preservation

Items such as unguarded elevator shafts, chemicals, overhead obstructions, open pits, acids, nitocellulose, toxic gases, stock that will absorb water, overloaded floors and others.

Rescue

Items such as unusual sleeping accomodations, emergency exit to roof, bridging possibilities, fire escapes and others.

Salvage

The location of values, such as important records, fragile stock, emergency drains, high value stock, floor drains, scuppers and others.

Fire Fighting

Items such as access to buildings, need for master streams, fire walls and doors, location of apparatus, fire stops bulkheads and others.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.4

Ref: pp. 298-310 #200
pp. 189-204 #110

DWELLING INSPECTIONS

When a fire company is assigned to inspection duty, the following regulations should be observed, and each member of the company should abide by them.

- No entry should be made into any dwelling without expressed permission from an adult.
- An adult occupant should be present when any inspection is made of a private residence.
- The owner or occupant should be carefully advised that comments on corrections are strictly suggestions and there are no enforcement follow ups.
- There should not be any public comment by the inspectors relative to an observation in any home.
- There should not be any release of information to either the news channels or insurance carriers.
- The office file on home inspections should be strictly confidential and should not be open to the public for any purpose.
- Inspections should always be made by a team. One person could become involved in an embarrasing situation involving legal technicalities.

CAUTION: The term "housekeeping" may mean environmental control to firefighters, but to a houskeeper it means keepir a house free of dust and in a neat and orderly condition. Only complimentary reference should be made concerning housekeeping.

3-11.3

Public Relations Through Inspection

The fire department can gain a favorable impression through sound inspection policies.

By educating the public on the importance of fire prevention efforts, the firefighter can improve the fire service image.

Follow-up voluntery home inspections will show the public that prevention is more important to the department than extinguishment.

It will further demonstrate to the public that a firefighter job goes far beyond extinguishing fires.

When conducting an inspection of buildinsg, the firefighter should reflect the image of fire prevention as sound business practice. They should act as professionals and make all recommendations tactfully and intelligently.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.4

Ref: pp. 298-310 #200
pp. 189-204 #110

TEACHING POINTS

DWELLING INSPECTIONS

Responsibilities of The Firefighter

Every firefighter must clearly understand that a dwelling inspection campaign is a fire department effort to reduce the number of fire deaths and home fires.

It is the firefighter's responsibility to represent the fire department and meet the citizens with dignity and pride.

The homemakers that the inspectors meet have every right to expect them to be fully qualified to advise on matters pertaining to fire prevention.

An important requisite for every firefighter is their ability to use common sense and a willingness to be guided by sound judgment and a sense of responsibility.

Some of the "Do's and Don'ts" of home inspection follow:

DO wear a neat well pressed uniform with shined shoes.

Do wear a uniform cap and badge.

Do approach each home on the sidewalk or path.

DO NOT cut across lawns.

DO NOT use the mailbox to leave fire prevention material at a residence.

DO ask permission to perform this service explaining that you are from the local fire department.

DO explain to the householder the purpose of the inspection and be courteous at all times.

DO NOT order corrections when a hazard is found.

DO explain the hazard, its potential danger and the proper method of correction.

DO NOT argue with the householder.

DO compliment the householder when favorable conditions are found.

Do not discuss neighbors or conditions found in other residences.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.4

Ref. pp. 298-310 #200
pp. 189-204 #110

DWELLING INSPECTIONS

The scheduled inspection should only include the:

- basement
- attic
- utility rooms
- storage rooms
- kitchens
- garages

Other rooms of the house may be inspected at the request of the householder, but never at the inspector's suggestion.

It is important that the home owner be sold on the idea of acrrying out suggestions.

REMEMBER:

- A courteous approach on all inspections
- Thank the owner or occupant for the invitation into their home.
- The primary interest is preventing a fire which could take the lives of the occupants and destroy the home.
- All comments are constructive and intended for eliminatic of hazardous conditions.
- Under no circumstances is any comment to be regarded as personal criticism of any member of the family.
- As far as the company inspector is concerned, the inspection is a confidential matter.
- Gossip should not be tolerated.
- Under nor circumstances should any conditions noted on a tour be made available to an insurance carrier, repair service organization, sales promotion groups. or in any form of publicity which would identify a given house.

What To Look For

This item suggests some of the things memebrs of fire departments should look for when making inspections of homes.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. , pp. 1-229

3-11 Inspection

3-11.4

Ref: pp. 298-310 #200
pp. 189-204 #110

TEACHING POINTS

DWELLING INSPECTIONS

What To Look For

The use of an inspection blank to be filled out for each dwelling is recommended.

Such a blank can easily be made from this list.

It assists the firefighters and also allows the chief or fire marshal to review the work, suggest corrections and mak summaries of the results.

ITEMS TO BE CHECKED FROM OUTSIDE

Condition of Roof

Roofing that is old and warped is easily ignited by sparks and flying brands.

Condition of Chimneys

Chimneys supported on wooden posts or brackets are likely to crack from settling and allow sparks or hot flue gases to set fire to woodwork.

Loose bricks, open joints and cracks which can be seen indicate that similar defects may exist in other parts where they might start a fire.

In such cases a thorough investigation should be made.

Conditions of Yard

Dry grass, leaves, paper, boards, branches of trees and other combustible waste materials in yards and under porches are readily ignitable and are a fire hazard to buildings.

Waste Burners

The location and arrangements for outdoor burning of waste should be noted for conformity with local regulations.

Condition of Garages and Sheds

Cleanliness and good maintenance are important precautions a against fire that apply to sheds and garages as well as other buildings.

Flammable Liquids

Oil and kerosene containers and tanks must be substantial and of a type that will prevent spillage.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.4

Ref: pp. 298-310 #200
pp. 189-204 #110

TEACHING POINTS

DWELLING INSPECTIONS

Flammable Liquids cont.

Gasoline, bensene and naptha should not be kept in dwellings.

Flammable liquids should be stored is a safety type can in an outside storage area.

Such flammable liquids should never be used for home drycleaning or for other purposes that would expose the dwellings to their explosive vapors.

ITEMS TO BE CHECKED IN BASEMENT

Waste papers, discarded furniture, and partly filled paint cans that are no longer worth keeping constitute a wholly unnecessary fire hazard.

A suggestion from a firefighter may provide just the necessary incentive to get such accumulations removed.

Rags soiled with oil or paint are especially hazardous because of the danger of spontaneous ignition.

Disorderly Arrangement of Fuel

Fire wood should be neatly piled or placed in a bin and kept separate from all waste paper and rags and well away from heating boilers and other heating appliances.

Papers and rags mixed in with wood or coal may start spontaneous heating under some conditions.

Furnaces, Stoves, Smokepipes and Gas Appliance Vents Close To Combustible Ceilings or Partitions

The firefighters should be familiar with local regulations governing such installations.

Charring of wood or blistering of paint indicate exposure to excessive temperature.

During operation of the furnance, wood that is too hot to hold in the hand is being exposed to excessive temperature.

Gas Appliances

Corroded piping and rubber tubing may result in gas leaks.

Automatic gas devices without provision for automatically cutting off the supply of gas when the pilot flame is extinguished may produce an explosion.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

3-11 Inspection

3-11.4

Ref: pp. 298-310 #200
pp. 189-204 #110

Gas Appliances

A separate shutoff should be provided on the supply line to every appliance.

Oil Burning Installations

Oil burners, supply tanks and piping need to be properly installed to avoid danger of fire.

Installation should be checked against local regulations and with the Standards for Oil Burning Equipment, NFPA No. 31.

Chimney Defects and Clearances

Wood beams extending into chimney walls have started many fires.

Unused chimney openings should be sealed with brick or tight fitting metal stops.

Work Rooms

Removal of shavings from work benches and the oderly storage of flammable liquids are features to be commented on.

Firefighters should note the location of exits from besements as information that will be helpful to them in time of fire.

Firestopping

The spaces at the bottom of the wall studs should be tightly firestopped to prevent fire in the basement from findi ng its way directly into the walls and up to other parts of the house.

Attics

When permission is obtained to go into the attic, the firefighter should check for faulty electrical equipment and other hazards.

Occupants should be encouraged to clean out all combustible material that is no longer worth keeping.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.4

Ref: pp. 298-310 #200
pp. 189-204 #110

HOME FIRE SAFETY

Home fire safety should include escape plans in case of fire

OPERATION EDITH - Exit Drills In The Home

A nationwide campaign designed to encourage families to prepare an escape plan and to practice evacuation of their home.

It is essential that each and every member of the family take an active part in the planning and executing of escape routes.

The more familiar they become with the plan, the less likely they are to panic in an actual fire situation.

These plans should be carefully reviewed and practiced with the children at regular intervals.

1. Have two escape exits from every room; a door and a window.

   You must devise two possible escape routes from each room in the home. The best method and easiest to execute will be through rooms and hallways in the home. If these avenues are blocked then escape through windows will be necessary.

2. The window should be able to be easily opened by childre and the doors should remain closed.

3. Always stay low if awakened by smoke; do not raise up.

4. A good system is to have a whistle by every bed to alert other family members if awakened by smoke.

   NOTE: An even better method is to install smoke detector alarms throughout the building.

5. Crawl out of bed and creep to the door. Feel the door and if it is warm, use the window for escape.

6. NEVER return to house once outside.

7. A fire escape ladder should be kept by the window in second-story houses and all family members should practice descending it.

8. A meeting place outside the home should be agreed upon so that all members will be together after escaping.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed. pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.4

Ref: pp. 298-310 #200
pp. 205-212 #110

4-11 Inspection

4-11.3

TEACHING POINTS

HOME FIRE SAFETY

EDITH

9. Inform the local fire department if there is an invalid in your home and what room they sleep in.

The most important facts to remember in case of fire are to move quickly but intelligently over the planned escape routes and, once at the meeting place, do not leave until all family members are present.

Alert the fire department, and above all DO NOT PANIC.

FIRE EXIT DRILLS FOR SCHOOLS

Fire exit drills are a matter of great importance when inspecting school buildings.

Some states have laws which establish where the responsibility lies for holding school fire drills, their frequency and other details.

Every fire department inspector should be aware of the extent of coverage and specific requirements of such regulations.

Where no law, code, or ordinance exists that require exit drills, the inspector should encourage voluntary adoption of a regular drill program.

The purpose of fire exit drills is to ensure the efficient and safe use of exit facilities available.

Proper drills ensure orderly exit under controlled supervision and prevent the panic which has been responsible for the majority of fatalities in major fire disasters of history.

Order and control are the primary purposes of the drill.

Speed in emptying buildings, while desirable, is not in itself an objective, and should be made secondary to the maintenance of proper order and discipline.

Fire exit drills should be held with sufficient frequency to familiarize all occupants with the drill procedure, and to have the conduct of the drill a matter of established routine.

Drills should be held at different times and under varying conditions to simulate the unusual conditions in a fire.

INSTRUCTORS NOTES

TEACHING POINTS

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 INspection

4-11.3
Ref: pp. 298-310 #200
pp. 205-212 #110

FIRE EXIT DRILLS FOR SCHOOLS

Responsibilty for planning and conducting of drills should be assigned only to competent persons qualified to exercise leadership.

Emphasis should be placed on orderly evacuation under proper discipline rather than upon speed.

Drills should include procedures which ensure that all persons in the building, or all persons subject to the drill actually participate.

If a fire exit drill is considered merely as a routine exercise from which some persons may be excused, there is grave danger that in an actual fire, the drill will fail in its intended purpose.

Fire alarm facilities should be regularly used for fire exit drills whenever they are available.

Evacuation of the building should take precedence over fire extinguishing operations , except where fire fighting operations may be necessary to permit the rescue of trapped occupants.

Drills improperly conducted by incompetent persons may actually be a source of danger to life.

Fire exit drills should be held at least once a month.

If climatic conditions may endanger the health of children during the winter months, weekly drills may be held at the beginning of the school term to complete the required number of drills before cold weather.

"Practice Drills" may be held just prior to the regular dismissal time during inclement weather.

Such drills would be held when the pupils are fully clothed, by using the exit alarm signal.

With such drills there would be no necessity of a return signal.

Drills should executed at different hours of the day.

Some of these periods are during the changing of classes, when the school is at assembly, during the recess or gymnastic periods or during other special events.

If a drill is called during the time the classes are changing, the pupils should be instructed to form a line and immediately proceed to the nearest emergency exit.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.3

Ref: pp. 298-310 #200
pp. 205-212 #110

TEACHING POINTS

FIRE EXIT DRILLS FOR SCHOOLS

Instruction cards should be conspicously posted which describes the procedure of the drills.

Every fire exit drill should be an exercise in school management.

Complete control of the class is necessary so that teachers can quickly and calmly form the ranks, stop the movement of students, halt, turn, or direct them as desired.

If the teachers know of the fire drill in advance, it becomes a drill for the uninformed students and an exercise for the teachers.

When neither teachers or students know in advance, it constitutes a fire drill for both groups.

The execution of each drill should be conducted in a brisk, quiet and orderly manner.

Running should be prohibited.

In case there are pupils incapable of holding their places in line while moving at reasonable speed, move them independently of the regular line of march.

If, for any reason, a line should become blocked, another exit should be used in order to prevent panic conditions as a result of inactivity.

Children are naturally active and may become restless if they stand in one place during the process of evacuation.

This condition may exist if all students file to the front or rear of the classroom toward a common exit.

This restlessness can be considerably reduced by alternating the direction of each row of students so that they all move continously in a "snakelike"fashion.

Monitors should be appointed from the more mature pupils to assist in the proper execution of all drills.

They should be instructed to hold doors open in the line of march or to close doors where necessary to prevent the spread of fire or smoke.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed., pp. 1-229

4-11 Inspection

4-11.3

Ref: pp. 298-310 #200
pp. 205-212 #110

Ref: NFPA No. 101 Life Safety Code

FIRE EXIT DRILLS FOR SCHOOLS

There should be at least two substitutes for each appointment.
Multiple appointments provide proper performance in case of absence of the regular monitors.

The searching of toilets or other rooms should be the duty of the teachers or other members of the staff.

Since drills simulate an actual fire condition, pupils should not be allowed to obtain clothing after the alarm is sounded.

Confusion might result from tripping over dragging apparel.

If it is necessary for scholl drill lines to cross roadways, signs reading "STOP ! SCHOOL FIRE DRILL," or its equivalent, should be carried by monitors to stop traffic during the drills.

Each class or group should proceed to a predetermined point outside the building and remain there while a check is made to see that all are accounted for and that the building is safe to reenter.

Such points should be sufficiently far from the building to avoid danger from fire in the building, interference with fire department operations, or confusion between classes or groups.

NO ONE should be permitted to reenter until after the drill is completed.

All fire exit drill alarms should be sounded on the fire alarm system and not on the signal system used to dismiss classes.

Whenever any of the school authorities determine that an actual fire exists, they should immediately notify the local fire department.

It should be a duty of teachers and principals to inspect all exit facilities daily.

Particular attention should be given to keeping all doors unlocked, the paths of egress unblocked and all stairs and fire escapes free from all obstructions.

Any condition likely to interfere with safe exit should be immediately corrected or reported to the appropriate authorities.

INSTRUCTORS NOTES

Ref: Essentials of Fire Fighting, #200, IFSTA, 1st ed., pp. 289-310

Ref: Fire Prevention & Inspection, #110, IFSTA, 4th ed. pp. 10229

4-11 Inspection

4-11.3

Ref: pp. 298-310 #200
pp. 205-212 #110

TEACHING POINTS

FIRE EXIT DRILLS IN SCHOOLS

The fire prevention inspector should check on the frequency of exit drills and the time required to vacate the building.

A stop watch should be considered as standard equipment for the evacuation practice of school buildings.

The building fire alarm system should be examined to see if the alarm can be heard in all portions of the building and that it can be activated from each floor.

Arrangements for promptly notifying the fire department should also be investigated.

Exit facilities in school buildings require careful study particularly from the standpoint of their usefulness in time of fire.

Attention should be given to each of the following basic requirements:

. That large assembly or basement rooms, and each floor have at least two means of egress.

. That all exit doors swing in the direction of exit travel and that all exit doors from large rooms or to the outside be equipped with panic hardware.

. That stairways and corridors and fire escapes be kept free from obstructions.

UNIT QUIZ

Fill in the blanks with the appropriate answer.

1. The firefighter's job goes far beyond extinguishing fires. Professional home and industry inspections will show the public that _____ is more important to the department than extinguishment.

2. Data on fire causes gained through investigations can be very significant in carrying on the fire _____ program.

3. A fire cause results when a _____ hazard and a _____ hazard are permitted to come into contact in the presence of air or oxygen.

4. Fire causes generally fall into two catagories;_____ or _____ _____ fires.

5. A fire hazard may be defined as a condition that will encourage a fire to _____ _____ or will _____ the extent or severity of a fire.

The following is a list of fuel supply and heat source hazards. Match the words correctly with the corresponding blanks below.

6. Ordinary_____; solids, wood, cloth or paper
7. Flammable and combustible_____; gasoline, oils, alcohol
8. Combustible_____; natural, LPG or manufactured
9. _____; nitrates, oxides or chemicals
10. Dusts; _____ wood or coal
11. _____; magnesium, sodium, potassium
12. _____; resins, casein, cellulose

a. chemicals
b. combustible
c. plastics
d. metals
e. liquids
f. gases
g. grain

Circle the most appropriate answer

13. A common fire hazard is a condition prevalent in _____ occupancies and will encourage a fire to start.

a. almost all

b. all

c. only selected

14. The term common in the phrase Common fire hazard refers to _____

a. probable frequency of hazard.

b. severity of hazard

c. only those fires in the average household

15. A special fire hazard may be defined as one that arises from the _____ _____ that are peculiar to the individual occupancy.

a. process or operations

b. degree of fire danger

c. enviroment and age of structure

16. Some examples of _____ hazards are painting, welding, flammable liquids, processing chemicals, acids and dusts.

a. common

b. special

c. target

17. A target hazard may be defined as a facility or process that could produce or stimulate a fire that would involve a possible large _____ loss, or a large concentration of materials of high monetary value or would _____

a. water, spoil beyond use

b. collapse, be salvaged as useless

c. life, burn rapidly

18. The term personal hazard covers all of the _____ of people who supervise, work in, live in, or visit the property or buildings in question.

a. typical routine

b. individual traits, habits and personalities

c. lax safety habits

19. Some examples of _____ hazards are lumber yards, bulk oil storage areas, shopping centers, hospitals, theaters, fur storage vaults and schools.

a. common

b. special

c. target

20. The scheduled inspection of a dwelling should only include the basement, attic storage rooms, garage and _____.

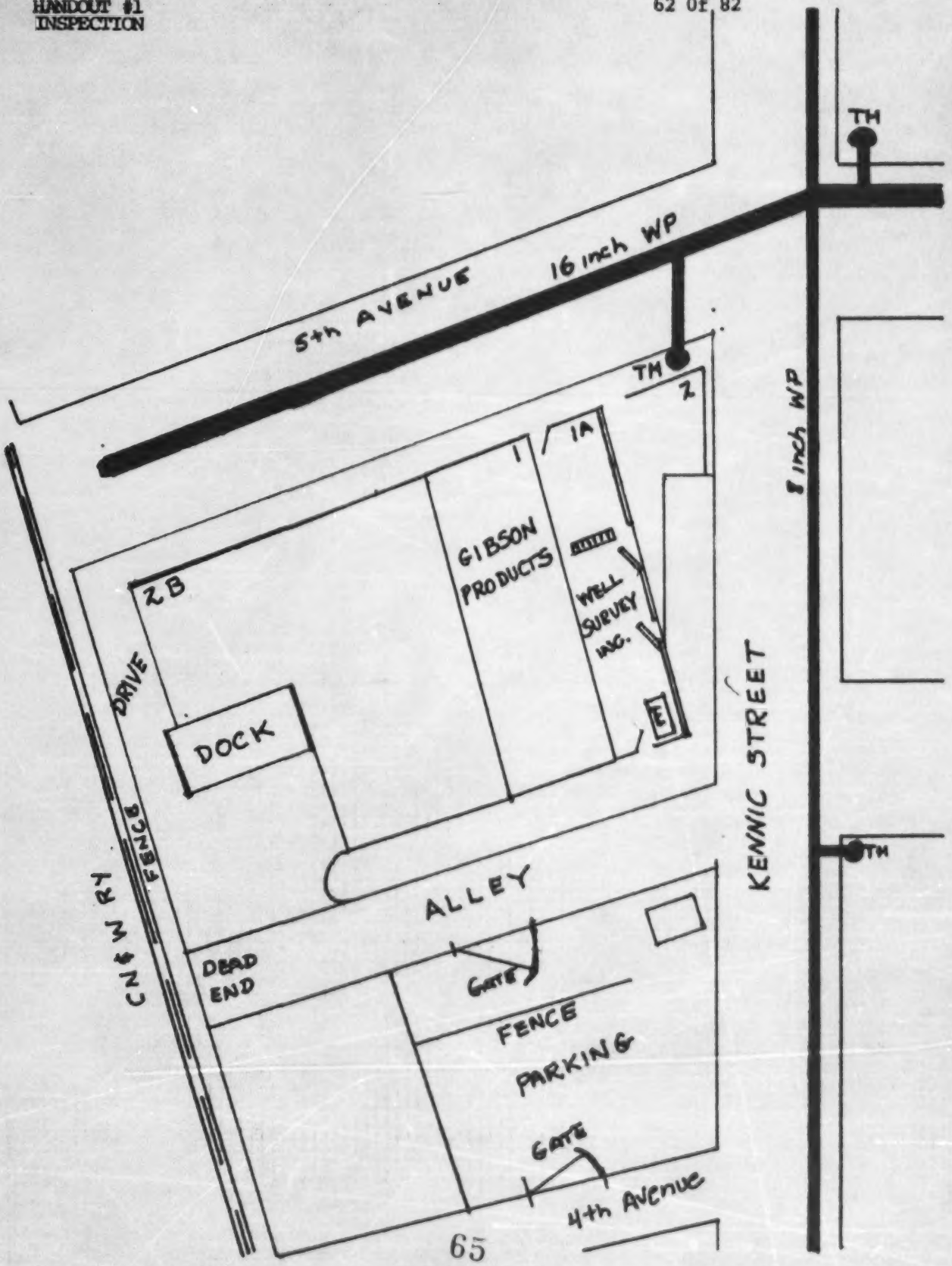
a. bedrooms

b. bathrooms

c. kitchen

Answer Key

1. prevention
2. prevention
3. fuel supply, heat source
4. accidental, deliberately set
5. start, increase
6. b combustible
7. e liquids
8. f gases
9. a chemicals
10. g grain
11. d metals
12. c plastics
13. a
14. a
15. a
16. b
17. c
18. b
19. c
20. c


5th AVENUE
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TH
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TH
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KENNIC STREET
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DOCK
CN & W RY
FENCE
ALLEY
DEAD END
GATE
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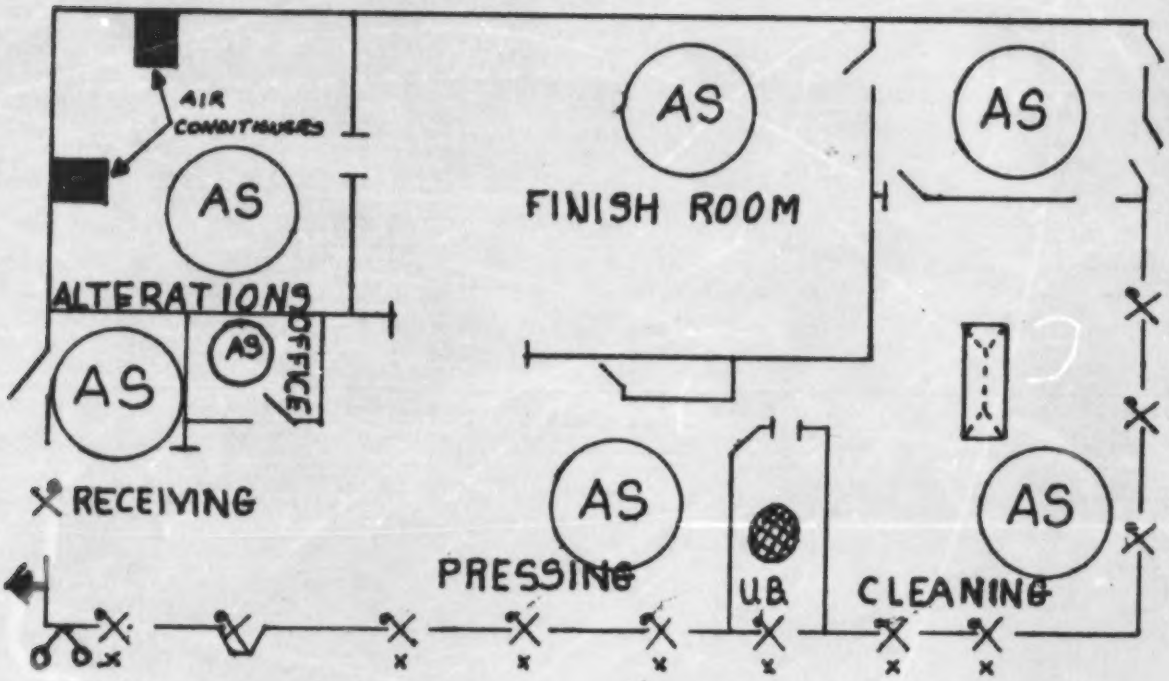
PARKING
GATE
4th Avenue


AIR CONDITIONERS
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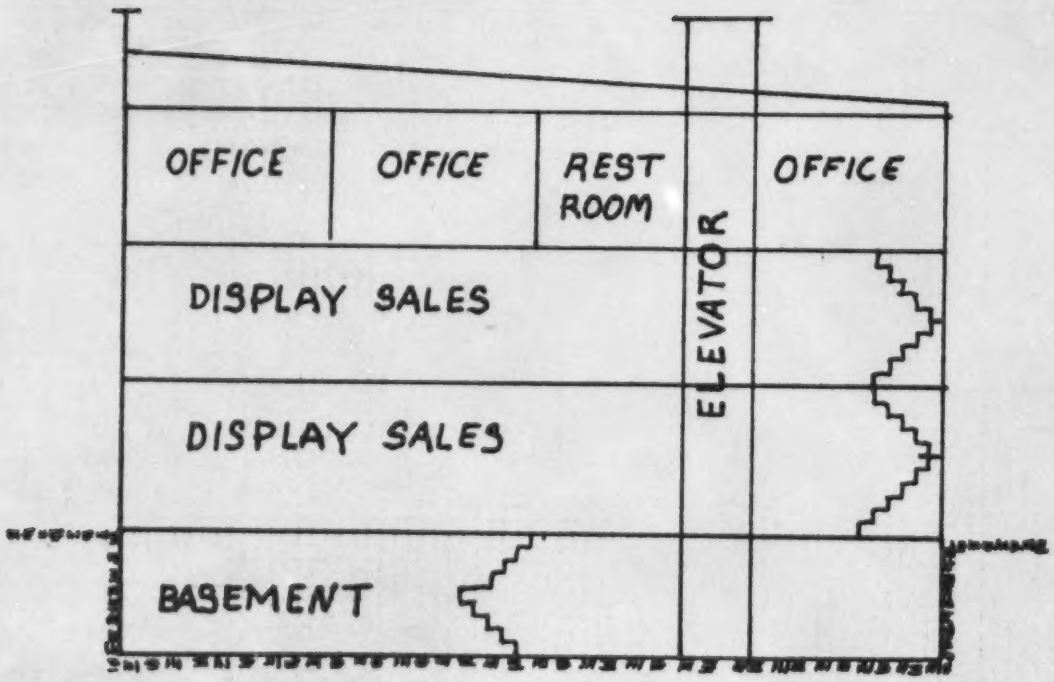
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ELEVATOR
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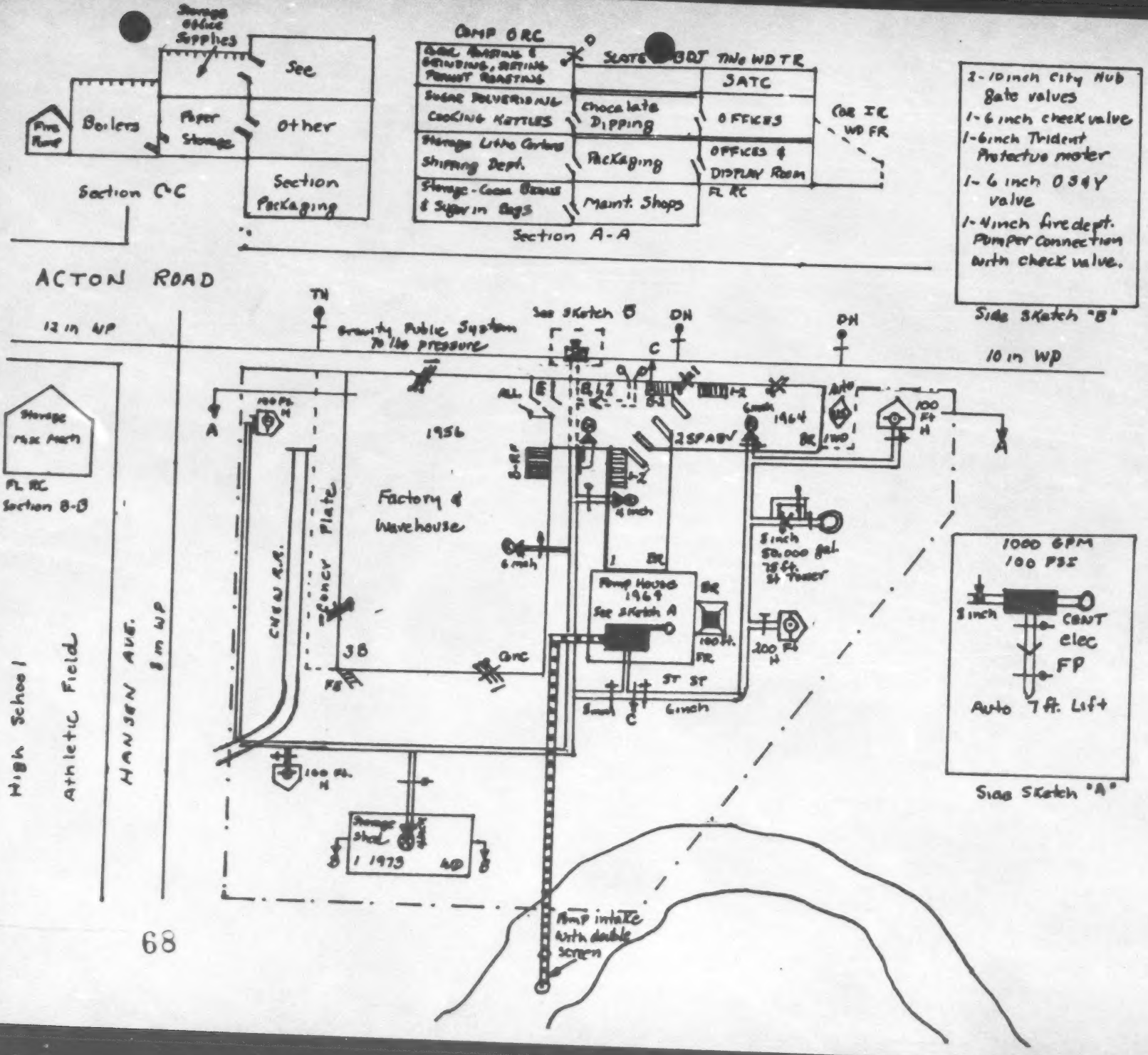
Storage office Supplies
See
Boilers
Paper Storage
Other
Section Packaging
Section C-C
COMP GRC
SLOPE
SATC
Chocolate Dipping
OFFICES
Packaging
OFFICES & DISPLAY ROOM
Maint. Shops
Section A-A
2-10inch City Hub Gate valves
1-6 inch check valve
1-6inch Trident Protectue meter
1-6 inch OS&Y valve
1-4inch fire dept. Pumper Connection with check valve.
Side Sketch "B"
ACTON ROAD
12 in WP
TN
Gravity Public System 70 lbs PRESSURE
See Sketch B
DH
10 in WP
Storage rock room
FL RC
Section B-B
1956
Factory & Warehouse
1964
2SPABV
Fancy Plate
CREW R.R.
Pump House 1969
See Sketch A
1 BR
6inch
8inch
50,000 gal. 75 Ft. St Tower
1000 GPM 100 PSI
CENT elec FP
Auto 7 ft. Lift
Side Sketch "A"
High School
Athletic Field
HANSEN AVE.
8m WP
Storage Shed
1 1979
Pump intake with double screen

PRE-FIRE PLANNING

Fire departments are organized for the purpose of protecting life and property from fire within the area they serve. Common sense would seem to dictate that it should plan to intelligently analyze its problems in order that it might do an efficient and effective job. If fire continue to occur, then the best defense is to plan to meet them in an organized way.

The only difference between the expected and the unexpected in pre-fire planning might well be just the difference in how thoroughly and how exhaustively the situation were analyzed, and how intelligently and effectively plans were made to care care of every possible contigency.

How should the fire defense problems in the community be analyzed ? What must be considered in mapping pre-fire plans ?

First consider the physical situation to be protected -- the specific risk that may be involved -- this means target and area hazards in the area to be protected. It also means the streets, roads, alleys to be traversed to get from the station to the fire, the location of water supplies and the volumes and pressures available. Also, to be considered, are the problems of exposures.

The first problem is the occurrence of a fire in a specific building. What are the problems the fire department may face in controlling this incident.

The second consideration is the equipment available to perform the necessary tasks.

The third and final consideration, is the personnel available to handle whatever emergencies that occur at all times. Here is where intelligent training and planning can make itself felt.

Consider the equipment available with which you must meet the various situations in developing your pre-fire plans. Do you have the capability to handle the largest fire that could occur in your community. What better means could you have than the pre-fire plan to demonstrate the need for better or more adequate equipment. It should'nt be enough to say you need the equipment, it should be demonstrated why. The need without the why is the conclusion without the reason.

The final phase of pre-fire planning considers personnel. Here, the only limits are intelligent planning and training. You can sit and do nothing waiting for an alarm or you can materially improve your fire defenses by planning, educating and training.

1. Plan the job.
2. Train the personnel to operate within the plan.
3. Teach them to use their knowledge practically and efficiently.

It is practical where you apply it to your specific situation, and it is efficient where planning and training are coordinated to meet the practical situation.

Pre-fire planning accomplishes two things;

First, it enables you to do the best with what you have, to meet the specific problems in your community.

Second, it enables you to map your plans for the means of doing the job in the future by knowing what your problems are at present.

As a practical matter, consider how the specific functions of pre-fire planning can help you analyze the specific risks you face.

In the first group are dwellings. These compose the largest number of places in which fires may occur. In general, you can adopt a standard plan for handling the average house fire. Most houses present approximately the same fire fighting problems. Frame construction, one to two stories in height, heated by gas, oil or electricity, with fireplaces and most generally involving Class A fires. Generally this type of fire can be pre-planned using standard operating procedures. Naturally their will be exceptions, and these exceptions should have their specific plans developed to meet the particular problems involved.

In the second group are the TARGET HAZARDS. Although they are lesser in number, they present a greater problem in concentraed life and property values. These include;Schools, hospitals, churches, places of publi assembly, and mercantile and manufacturing plants within your community. They involve specific problems and should have a plan for handling each separately as each presents a special problem.

In order to be effective in providing fire protection and the best utilization of available equipemnt and manpower, you must have a full knowledge of every one of these occupancies in which a fire may occur. Nothing in the entire field of fire fighting is more definite and certain than the physical situation -- the nature of the structure and its occupants -- which confronts every fire department. Every single one of them is capable of being studied by you and presents a specific problem in fire fighting which you may be called upon to solve at some future time. This poses a challenge to your itelligence and ingenuity in devising the best plan for minimizing the loss and damage should a fire occur.

The first consideration that a fire officer should give, in his pre-fire planning, is to have a full and complete knowledge of every building in his protection district. Without this knowledge he cannot operate efficiently and effectively. Every building can present a different problem from other buildings because of some one thing that applys to it alone. You will always find in a fire of any size some situation that requires you to handle it differently than any other fire.

To prepare the department to do an itelligent and efficient job of fire fighting, a definite plan pre-fire planning is essential. Training and education in the department is the theory — pre-fire planning is the practical application of the theory to known conditions.

The purpose of pre-fire planning is to treat each building surveyed as a specific problem in fire fighting. Having accepted this situation -- that you are faced certain specific fire problems -- how should you go about making a proper analysis in order that you can make the most effective use of your equipment and personnel.

You should have a definite form which can be used as a basis for an orderly and systematic survey for accumulating all pertinent data and information required for proper analysis, study of the problem and for formulating a plan of action.

This survey form should consist of two parts; a map and diagram of the area and each floor of the building and all pertinent facts necessary to develop the pre-fire plan.

Some of the pertinent facts which a survey should contain are;

1. Construction
   a. Type
   b. Height
   c. Dimensions
      (1) How bounded: streets, alleys, vacant lots, other buildings
   d. Location of openings
      (1) Stairways, elevator shafts, fire escapes, escalators, roof vents, doors, etc.
   e. Internal water supply
      (1) Sprinklers and standpipes
      (2) Shutoffs

2. Occupancy
   a. Life hazards
   b. Contents
   c. Processes

3. Exposures
   a. Nature and location

4. Water supply
   a. Hydrant locations
      (1) Within radius of 300-500-1000 feet
      (2) Size of mains
         a. Pressures and volume available
   b. Other water supplies

5. Fire equipment
   a. Type of equipment available
   b. Location
   c. Mutual aid available
   d. Possible need for special equipment
      (1) Deluge sets, ladder pipes, elevating platforms, aerials, etc.

6. Personnel
   a. Manpower available
      (1) Paid departments
         (a) Type of companies
         (b) Number of men
      (2) Volunteer departments
         (a) Number of men probably responding
         (b) Deployment of manpower as it responds to vital uses

These first six items, if thouroughly surveyed, should adequately enable the department to make an analysis of the problems it faces. From here on your plan maps out how you are going to use what you have as you develop your pre-fire plan.

7. Rescue

   a. The first plan must be for the saving of life
   b. Means to be employed for checking on the life occupancy
   c. Methods to be employed in their removal
      (1) Type situation
         (a) Schools and other places of public assembly
         (b) Hospitals, Nursing homes and similiar places presenting special problems

8. Engine Companies

   a. Ordinarily, the first and basic equipment to respond
   b. Amount of hose needed from each hydrant or standpipe to cover entire area involved or exposed
   c. Need and location of pumpers for increased pressure or supply
   d. Possible points for operation of hand lines on each floor, in attic, on roof or to cover exposures

9. Ladder companies

   a. Height of buildings and length of ladders required for access to each floor and roof
   b. Need of ladders for interior access such as:
      (1) Use on interior walls
      (2) Means of access to cokloft or attic

10. Ventilation

   a. Places to effect in event of need
   b. Means available
      (1) Skylights, shafts, etc.
      (2) Roof structure in the event roof opening must be effected
   c. As effecting possible exposures
      (1) Both interior and exterior

11. Salvage

   a. Consideration of character of contents
   b. Means to be employed
      (1) Number of salvage covers needed for particular operations
   c. Means and methods of removing water from various floors

12. Any other factors which seem necessary

   a. Overhauling
   b. Traffic control
   c. Police assistance
   d. Coordinating with other agencies

The most practical method of making a survey for pre-fire planning is by an inspection for that purpose by the companies most likely to respond to the location.

It is recommended that the survey for pre-fire planning should be for that specific purpose rather than as part of, or incident to, the regular fire prevention inspection. The reason for this is that they are conducted for different purposes. One is a fire prevention function, while the other is a fire protection function. They are two different types of inspections for two different purposes. Naturally, if one discloses a situation which might assist the other in doing a better job that information should be transmitted to the proper persons.

Pre-fire planning surveys are conducted as part of a fire protection program to better enable fire departments to combat fires when they occur.

When making pre-fire planning surveys, it should only be done with the owner's permission, at their convenience, and they should be encouraged to work with you in analyzing and understanding the fire protection problems. The object and purpose of the pre-fire planning survey should be explained to them and any problems discussed with them. They should understand that you are not trying to find out hwat is wrong with their property but rather that you are planning the beat means of handling the situation should a fire occur.

Pre-fire planning surveys present an excellent opportunity for developing good publi relations. Properly conducted it will assist in developing respect for your department and an understanding of the services you provide your community.

The entire crew should go through the buildings familiarizing themselves with every phase of the problem so that they will be better able to understand what it is, and how the plan is devised to handle it. When the plan is worked out, they should be able to visualize, on the grounds and in the buildings, each phase of the plan.

The buildings should be examined methodically from top to bottom, floor by floor, from the roof, thru the attic or cokloft, to the basement. The entire crew making the survey should stay together, with one or two of its members detailed to prepare the diagrams which will show the locations of the pertinent items disclosed by the survey.

It cannot be over-emphasized that this type of survey should be thorough and complete. As has been pointed out before, the only thing that migh occur at a fire when efficient pre-fire planning has been conducted which might not have been foreseen, is the unexpected. The more thorough the analysis of the specific problems presented in a particular building has been, the less chance there is for the unexpected. Every concivable possibility or situation should be analyzed so thoroughly that the fire will be fought according to a prepared plan to cover that situation.

Plenty of time should be taken to make a permanent and complete record which will be available for periodic study by all members of the department. This will subject the plan to study and review permitting its modification and improvement in the light of experience and future changes. The plan should be studied on the fire ground as well as in the station by all members of the department, paid or volunteer.

A fire department is a public service agency, and as such, all of its functions, whatever they may be, should be directed in the public interest. If you, as fire fighters, realize that, and, in conducting your various functions, are mindful of the public you serve you will find that good public relations will result from the proper performance of your duties.

In the Pre-fire planning surveys and fire prevention inspection programs, you have one of your best opportunities for an effective and long-range program of public education.

An effective pre-fire planning survey program will provide the means to:

1. Demonstrate graphically to your local government bodies the need for improvement in your fire defenses.

2. Prepare fire fighting personnel to effectively combat fire using the means available.

3. Increase the publics awareness of the services provided by the department.

4. To provide a program that generates teamwork within the department.

YOU SHOULD MAKE FULL UTILIZATION OF THE OPPORTUNITIES PRE-FIRE PLANNING AFFORDS -----

YOU CANNOT DO AN EFFECTIVE JOB WITHOUT IT -----

PRE-FIRE FIGHTING SURVEY

_____ FIRE DEPARTMENT DATE _____ STATION _____

OFFICER IN CHARGE OF SURVEY _____

BUILDING _____ ADDRESS _____ BLDG. MGR. _____

BLDG. VALUATION _____ CONTENT VALUE _____ BLDG. OWNER _____

BUSINESS OCCUPANTS (NAME EACH) _____

_____

_____

WATER SUPPLY:

HYDRANTS WITHIN 300 FT. _____ OTHER WATER SUPPLY _____ FT

" " 500 FT. _____ LOCATION _____

" " 1000 FT. _____

NEAREST HYDRANT IN FRONT OF BLDG. _____ FT. REAR OF BLDG. _____ FT.

LOCATION _____ LOCATION _____

SIZE OF MAIN FEEDING HYDRANTS _____ PRESSURE _____

AVERAGE GPM AVAILABLE PER HYDRANT _____

STATIC SUPPLY _____ TYPE _____

LOCATION _____

HEAVY STREAMS

CAN LARGE FIRE STREAMS BE USED ON ALL SIDES OF BUILDING ? _____

IF NOT, WHAT SIDES CAN BE USED ? _____

WHERE WOULD DELUGE SETS HAVE TO LOCATED ? _____

WHAT OBSTRUCTIONS TO PENETRATION OF LARGE STREAMS ? _____

_____

WHERE CAN LADDER PIPE BE USED ? _____

AERIAL LOCATED _____

LADDERS

WHAT LENGTH OF LADDER TO REACH ROOF ? _____ FRONT _____ REAR _____

MOST ACCESSIBLE MEANS OF REACHING ROOF TO VENTILATE _____

_____

WILL BUILDING ADJOINING BE USED FOR LADDERING ? _____ HEIGHT _____

LENGTH LADDERS NEEDED _____

WILL LADDER FOOTINGS BE LEVEL _____ IF SLOPING CAN LADDER BUTT BE TIED _____

WHERE CAN LADDERS BE USED _____

_____

OVERHEAD WIRES, SIGNS, OBSTRUCTIONS _____

_____

BUILDING STATISTICS

APPROX. DIMENSIONS OF BLDG: LENGTH _____ WIDTH _____ HEIGHT _____ AGE _____

NO. OF STORIES _____ BASEMENT _____

SUB-BASEMENT _____

BUILDING CONSTRUCTION

TYPE CONSTRUCTION: MASONRY ___ BRICK ___ METAL ___ FRAME ___ MILL _____

TYPE FOUNDATION: CONCRETE ___ CEMENT BLOCK ___ WOOD POSTS ___ SOLID ___ OPEN _____

ROOF: FLAT ___ ARCH ___ SLOPE ___ SAWTOOTH ___ CONCRETE ___ WOOD ___ METAL _____

ROOF COVERING MATERIAL: _____

LIGHT WELLS: NONE ___ HOW MANY ___ HOW DEEP ___ PROTECTED ___ BY _____

SKYLIGHTS: NONE ___ NUMBER ___ SIZE _____

DO SKYLIGHTS STOP IN ATTIC ? _____ EXTEND THROUGH ATTIC ? _____

ELEVATOR HOUSE: NONE ___ LOCATION _____

CAN ELEVATOR HOUSE BE USED FOR VENTILATION ___ HOW _____

_____

ROOF VENTS: NONE ___ NUMBER ___ SIZE ___ ROOF SCUTTLES TO ATTIC ___ SIZE _____

LOCATION _____

CHIMNEY: CONDITION ON ROOF ___ CONDITION IN ATTIC _____ OTHER _____

ATTIC: NONE___ BLIND___ LOCATION OF INTERIOR ACCESS HOLE_____

_____

SIZE ACCESS HOLE____ CAN ATTIC BE WORKED IN_____

DO VENT DUCT OR DUMB WAITER SHAFTS TERMINATE IN ATTIC____ WHERE_____

_____

TRASH OR STORAGE IN ATTIC: YES___ NO___ WHAT_____

_____

CONDITION OF WIRING IN ATTIC: GOOD____ FAIR____ POOR____

ARE WALLS BETWEEN BUILDING PIERCED_____ FIRE DOORS_____

DO CEILING JOISTS EXTEND INTO MASONRY WALLS_____

TYPE OF CONSTRUCTION OF CEILING-TOP FLOOR_____

VENTILATING: ELEVATOR SHAFTS VERY DIFFICULT___ AVERAGE___ EASY___

STAIR WELLS " "___ "___ "___

VENTILATION DUCTS " "___ "___ "___

LIGHT WELLS " "___ "___ "___

PENT HOUSES " "___ "___ "___

NAME IN ORDER OF PREFERENCE THE MEANS OF VENTILATING FROM ROOF:

1._____ 2._____

SALVAGE AND OVERHAUL: is stock off floor on stands or skids_____

IS STOCK OR CONTENTS STORED OR STACKED SO THAT SALVAGE COVERS CAN BE QUICKLY USED ____ IF NOT, WHAT FOUND_____

_____

STOCK WHICH WILL ABSORB WATER_____

LOCATION_____

ARE FLOORS UNDER HEAVY STOCK SUPPORTED WITH UNPROTECTED METAL POSTS_____

STOCK WHICH WILL ABSORB ENOUGH WATER TO CAUSE OVERLOAD OR COLLAPSE_____

LOCATION_____

CAN WATER BE DIVERTED QUICKLY TO STAIRS, SHAFTS, SCUPPERS OR DRAINS_____

HOW_____

WALLS: MASONRY___ WOOD___ METAL___ CONDITION: GOOD___ FAIR___ POOR_____

IF PIERCED: FIRE DOOR OPENING AT_____

SELF CLOSING____

FLOORS: MASONRY___ WOOD___ METAL___ CONDITION: GOOD___ FAIR___ POOR_____

CEILINGS: OPEN TO RAFTERS___ PLASTER___ SHEETROCK___ METAL___ WOOD_____

CONDITION: GOOD____ FAIR____ POOR____ HOLES FOR FIRE SPREAD_____

LOCATION_____

STAIRS: NONE___ CONTINOUS___ STAGGERED___ STAIR WELL OPEN___ ENCLOSED_____

STAIRWAY DOORS UNLOCKED___ METAL CLAD___ SELF CLOSING___

ENCLOSURE MATERIAL_____

ELEVATOR SHAFTS: NONE___ PARTIALLY ENCLOSED___ FULLY ENCLOSED_____

ENCLOSURE MATERIAL_____ ELEVATOR LOCATION_____

DOORS SELF CLOSING___ FUSIBLE LINK CLOSING____ FIRE DEPARTMENT CONTROL PROVIDED___

LOCATION OF EMERGENCY KEY_____

VERTICAL OPENINGS: BELTWAYS___ CONVEYOR WAYS___ HATCHES___ HOISTS___ LIGHT WELL___

AIRSHAFT___ ESCALATORS___ PIPE SHAFTS___ RANGE DUCTS___ VENT DUCTS___ TRAP DOORS___

DUMB WAITERS___ LAUNDRY CHUTES___ TRASH CHUTES___ MISCELLANEOUS_____

TYPE AND LOCATION_____

_____

FIRE DOORS: NONE___ FUSIBLE LINK CLOSING___ AUTOMATIC CLOSING___ WILL DOOR OPERATE__

CLOSED AT NIGHT___ NON-COMBUSTIBLE SILL___ OBSTRUCTIONS TO CLOSING_____

_____

CONDITION_____

EXPOSURES: EXTERIOR_____

BUILDING OPENING EXPOSED_____

INTERIOR_____

BEST EMERGENCY ENTRANCE TO BUILDING_____

_____

EXITS FROM BUILDING (LIST)_____

_____

_____

EXITS NOT OBSTRUCTED___ EXITS OBSTRUCTED___ WITH WHAT _____

_____

IF OBSTRUCTED WHICH EXIT _____

BASEMENT, CELLAR: NONE___ PARTIAL___ FULL___ NUMBER OF STAIRWAYS TO _____

NUMBER OF OPENINGS FROM BASEMENT UPWARD___ STOCK ON SKIDS OR OFF FLOOR _____

FLOOR DRAINS___ LOCATION _____

_____

MARKED WITH OVERHEAD SIGNS_____ BEST EMERGENCY ENTRANCE TO BASEMENT IN ORDER OF

ACCESSIBILITY: 1. _____

2. _____

FLAMMABLE OR HAZARDOUS LIQUIDS: KIND _____

AMOUNT _____

CONTAINERS _____

LOCATION IN BUILDING _____

LOCATION OUTSIDE BUILDING _____

HAZARDOUS SOLIDS: KIND _____

AMOUNT _____

CONTAINERS _____

LOCATION IN BUILDING _____

LOCATION OUTSIDE BUILDING _____

POWER: VOLTAGE INCOMING _____ VOLTAGE USED _____

TRANSFORMER VAULT LOCATION _____

ELECTRIC: LOCATION MAIN SERVICE ENTRANCE _____

_____

LOCATION METER AND MAIN SWITCH _____

_____

LOCATION MAIN SUB-PANELS AND SWITCHES _____

ARE SWITCHES LABELED FOR BUSINESS SERVED_____

GAS: NONE____

LOCATION OF METER AND MAIN SHUT-OFF VALVE IN BUILDING_____

_____

LOCATION OF SHUT-OFF IN STREET OR ALLEY_____

_____

WATER: LOCATION MAIN SHUT-OFF IN BUILDING_____

_____

IS VALVE MARKED___LOCATION OF SHUT-OFF VALVE IN STREET_____

_____

HEATING: ELECTRIC____STEAM____HOT WATER____HOT AIR____SPACE HEATERS_____

GAS____OIL____HEAVY OIL____

LOCATION HEATING UNIT_____

ENCLOSED IN FIRE RESISTANT ROOM____CONDITION_____

REFRIGERATION: NONE____LOCATION OF PLANT_____

_____

REFRIGERANT USED_____POWER SWITCH LOCATION_____

_____

IS STOCK CLEAR OF UNITS____IF NOT--WHAT_____

AIR CONDITIONING: NONE___LOCATION OF UNITS_____

_____

LOCATION OF MAIN SWITCH_____

_____

IS SWITCH LABELED____

STANDPIPES AND SPRINKLERS:

STANDPIPES: NONE____LOCATION IN BUILDING_____

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_____

LOCATION F.D. CONNECTIONS_____

_____

SYSTEM: WET____DRY____

NUMBER OF FEET OF HOSE REQUIRED TO REACH FROM STREET TO F.D. CONNECTION_____

CONDITION OF CONNECTION _____ NO. OF FLOOR OUTLETS _____

CONDITION OF OUTLETS _____ VALVES: CLOSED ____ OPEN ____

NUMBER OF FEET OF HOSE REQUIRED FROM OUTLET TO FURTHEREST POINT-ANY FLOOR _____

NUMBER OF FEET OF HOSE REQUIRED FROM OUTLET TO FURTHEREST POINT NEXT FLOOR _____

INTERIOR STANDPIPES: NONE ___ LOCATION IN BUILDING _____

_____

NO. OF OUTLETS ____ VALVE CONDITION ____ HOSE CONNECTION THREADS ____ NST _____

NOZZLE IN PLACE AND CLEAR ____ HOSE PROPERLY RACKED ____

F.D. CONNECTION ____ NST ____ OTHER ____ CONDITION _____

SPRINKLERS: NONE ____ DRY PIPE ____ WET ____ DELUGE ____ PRE-ACTION ____ ANTI-FREEZE ____

LOCATION OS&Y VALVES _____

_____

LOCATION POST INDICATOR VALVES _____

_____

OPEN _____ CLOSED _____ MARKED _____

NUMBER OF FLOORS COVERED _____ IS BASEMENT SPRINKLERED _____

LOCATION STREET METER AND SHUT-OFF VALVES _____

_____

IS STOCK PILED CLOSER THAN 18INCHES BELOW SPRINKLER HEADS _____

WHERE _____

IN NON SPRINKLERED OCCUPANCIES IS STOCK PILED CLOSER THAN 36 inches BELOW UNDERSIDE OF CEILING _____ WHERE _____

_____

LIFE SAFETY:

NUMBER OF OCCUPANTS: DAYTIME: OVER 50 YEARS ____ UNDER 7 YEARS ____ TOTAL _____

NIGHTTIME: " " " ____ " " " ____ TOTAL _____

INVALIDS OR HANDICAPPED ____ LOCATION _____

_____

OUTSIDE FIRE ESCAPES ____ LOCATION _____

_____

LADDER TYPE_____ STAIR TYPE_____ CONDITION_____

OBSTRUCTED: YES_____ NO_____ BY WHAT_____ _____

WINDOWS WIRE GLASS_____ FIRE RESISTANT DOORS_____

INSIDE FIRE ESCAPES: NONE_____ LOCATION_____

_____

OPEN STAIRWAYS_____ SMOKE TOWERS_____ ENCLOSED STAIRWAYS_____

ENCLOSURE MATERIAL_____ DOORS SELF CLOSING/FIRE RESISTANT_____

OPERATED PROPERLY_____ WERE DOORS CLOSED_____ FUSIBLE LINKS_____ AUTOMATIC

DOOR CLOSERS_____

EXIT LIGHTS: NONE_____ OVER ALL EXITS_____ ILLUMINATED PROPERLY_____ OFF_____

OUTSIDE STAIRS OR RAMPS: NONE_____ LOCATION_____

_____

MATERIAL_____ CONDITION_____

FIRE ALARM SYSTEMS: NONE_____ MANUAL FIRE ALARM BOXES_____ SMOKE DETECTORS_____

HEAT DETECTORS_____ LOCAL ALARM_____ CENTRAL STATION SUPERVISED_____ DIRECT TO

FIRE DEPARTMENT_____ BELLS_____ CHIMES_____ HORNS_____ ON EVERY FLOOR_____

LOCATION_____

_____

CONTROL PANEL LOCATION_____

WEEKLY TEST RECORD AVAILABLE FOR INSPECTION: YES_____ NO_____

FIRE EXTINGUISHERS: NONE_____ KIND_____

LOCATIONS_____

_____

EXTINGUISHERS CHARGES AND PROPERLY DATED: YES_____ NO_____ SUITABLE FOR HAZARD_____

CONDITION: GOOD_____ FAIR_____ POOR_____

HOUSEKEEPING: GOOD_____ FAIR_____ POOR_____ REMARKS_____

_____

PERSONNEL MAKING SURVEY:

_____ _____

_____ _____

ADD PAGE FOR DRAWING OF BUILDING AND GROUNDS

A FIRE DEPARTMENT INSPECTION REPORT

FOR

STEVEN A. JONES

ADMINISTRATOR

CONCERNING

CHERRYHILL

A RESIDENTIAL CARE FACILITY

14460 OAKTON AVENUE

_____ Fire Department

Inspectors

_____

_____

_____

SAMPLE

_____ FIRE DEPARTMENT

16617 Greenleaf Avenue

May 22, 1981

Mr. Steven A. Jones, Administrator
Cherryhill
14460 Oakton Avenue

Dear Mr. Jones:

A fire prevention inspection of your facility was completed by our inspection bureau on April 23, 1981.

We would like to express our appreciation for the courtesy and cooperation extended to our inspectors by you and your staff during the inspection.

The inspection report, containing the findings and recommendations of our inspectors, is enclosed for your information and/or action.

If you have any questions relative to the report or we can assist you in solving any problems encountered in correcting the deficiencies noted, please contact the Deputy Chief of the Fire Prevention Bureau.

Sincerely

Peter S. Asquith
Chief of the Department

PSA/vkl

SAMPLE COVER LETTER

SAMPLE

INSPECTION REPORT

LOCATION	HAZARD	RECOMMENDATIONS
Second Floor Hallway	30 ampere fuses used to protect No. 14 wire	Remove 30 ampere fuses and replace them with 15 ampere fuses. If 15 ampere fuses will not carry the load it will be necessary to have the wiring checked by a licensed electrician and make necessary repairs in accordance with the National Electrical Code.
Second Floor Dormitory	Emergency exit route to fire escape blocked by bed.	Provide an aisle 4 feet wide through the dormitory to establish a permanent route for egress to window and to fire escape.
First Floor Kitchen	No vent in hood above stove.	Install an exhaust fan and vent in the hood over the stove to liberate vapors and grease. The vent and fan should be labeled by Underwriter's Laboratories, Incoporated, and installed according to recognized standards.
First Floor Rest Room	Dust cloths saturated with furniture oil, stored in closet.	Store; mops, oil saturated rags, and cleaning equipment in closed metal containers or hang out of doors.
Basement Recreation Room	Electric cord to the Coke machine installed through door opening.	Install an electrical outlet in the room housing the machine. If feasible the outlet should be installed just north of the machine.
Furnace Room	Combustibles stored in the immediate area of the heating unit.	Remove all Christmas decorations to an isolated storage area. Remove other combustibles to an outside storage area.
Storage Room	Paint thinner and lawn mower fuel are stored in improper , unlabeled containers, and in a dangerous area.	Flammable liquids must be stored in U.L. labeled safety cans and in a place separate from the house. Remove all paints, thinners, and other falmmable liquid fuel to an outside storage place, procure U.L., labeled safety cans and identify the contents of each can.

SAMPLE